

# SEARCH REQUEST FORM

Requestor's Name: \_\_\_\_\_ Serial Number: \_\_\_\_\_  
Date: \_\_\_\_\_ Phone: \_\_\_\_\_ Art Unit: \_\_\_\_\_

## Search Topic:

Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevant citations, authors, keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevant claim(s).

## STAFF USE ONLY

|  |  |  |
|--|--|--|
| Date completed: <u>4/22</u>            | Search Site  | Vendors  |
| Searcher: <u>P. Schreiber 308-4792</u> | STIC   | IG   |
| Terminal time: <u>15</u>               | <input checked="" type="checkbox"/> CM-1 <u>6403</u> | STN  |
| <sup>prep</sup> Elapsed time: <u>6</u> | <input type="checkbox"/> Pre-S                       | Dialog   |
| CPU time: _____                        | Type of Search                                       | APS  |
| Total time: _____                      | <input type="checkbox"/> N.A. Sequence               | Geninfo  |
| Number of Searches: _____              | <u>5</u> <input type="checkbox"/> A.A. Sequence      | SDC  |
| Number of Databases: <u>1</u>          | <input type="checkbox"/> Structure                   | DARC/Questel   |
|  | <input type="checkbox"/> Bibliographic               | <input checked="" type="checkbox"/> Other <u>Compu</u> |

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Schreiber, David

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**From:** Yu, Misook  
**Sent:** Monday, April 22, 2002 2:59 PM  
**To:** Schreiber, David  
**Subject:** 09/499,662

I have to additional search.

The application claims benefits to two prior abandoned applications, 09/053,583 and 09/408,646. Would you please compare SEQ.ID NO. 50, 52, 54, 109, and 89 of the current application with all of the SEQ ID of the two abandoned applications? I would like to know if the 5 sequences were in the prior applications.  
Thank you very much.

Examiner Misook Yu, Ph.D.  
703-308-2454 (Phone)  
Art Unit 1642  
CM1-8E18 (Room)  
CM1-8E12 (Mail Box)

*For priority check*

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> O <  
O I O Intellicenetics  
> O <

FastDB - Fast Pairwise Comparison of Sequences  
Release 5.4

Results file us-09-499-662-117.res made by sdauid on Mon 22 Apr 102 14:26:35-PDT.

Query sequence being compared: US-09-499-662-117 (1-470)  
Number of sequences searched: 87  
Number of scores above cutoff: 87

Results of the initial comparison of US-09-499-662-117 (1-470) with:  
File : yu662.pep

```

100-
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N
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U 50*
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M
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B
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E
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R
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O
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F 10-
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S
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E 5-
-
Q
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U
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E
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N
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C
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E
-
S
-
SCORE 0 52 104 157 209 261 313 366 418 470
STDEV 1 1 1 1 1 1 1 1 1 1

```

## PARAMETERS

Similarity matrix PAM-150 K-tuple 2  
Threshold level of sim. 16%  
Mismatch penalty 1 Joining penalty 20  
Gap penalty 1.00 Window size 32  
Gap size penalty 0.05  
Cutoff score 0  
Randomization group 0

## SEARCH STATISTICS

Scores: Mean 59 Median 8 Standard Deviation 136.86  
Times: CPU 00:00:00.02 Total Elapsed 00:00:01.00

Number of residues: 9504  
Number of sequences searched: 87  
Number of scores above cutoff: 87

The scores below are sorted by initial score.  
Significance is calculated based on initial score.

2 100% identical sequences to the query sequence were found:

| Sequence Name | Description   | Length | Init. Score | Opt. Score | Sig. Frame |     |     |     |
|---------------|---|--------|-------------|------------|------------|-----|-----|-----|
| 150           | GPVSFFLAPSSKSTSGTALGCLVKDYFPEPTVSNWNSGALSTGVAHVFPAVQSSGLSLSSVVTVPSSSL | 150    | 160         | 170        | 180        | 190 | 200 | 210 |
| 150           | GPVSFFLAPSSKSTSGTALGCLVKDYFPEPTVSNWNSGALSTGVAHVFPAVQSSGLSLSSVVTVPSSSL | 150    | 160         | 170        | 180        | 190 | 200 | 210 |

1. US-09-408-646-11 Sequence 117, Application 470 470 470 3.00 0  
2. US-09-053-583-11 Sequence 117, Application 470 470 470 3.00 0

2 100% similar sequences to the query sequence were found:

| Sequence Name  | Description | Length | Init. Score | Opt. Score | Sig. Frame |
|--|-------------|--------|-------------|------------|------------|
| 3. US-09-408-646-14 Sequence 147, Application 470 470 470 3.00 0 |             |        |             |            |            |
| 4. US-09-408-646-14 Sequence 143, Application 470 470 470 3.00 0 |             |        |             |            |            |

The list of other best scores is:

| Sequence Name   | Description                                | Length | Init. Score | Opt. Score | Sig. Frame |
|---|--|--------|-------------|------------|------------|
| 5. US-09-408-646-14 Sequence 145, Application 470 469 469 3.00 0  | **** 2 standard deviations above mean **** |        |             |            |            |
| 6. US-09-408-646-89 Sequence 89, Application 470 469 469 3.00 0   |  |        |             |            |            |
| 7. US-09-053-583-89 Sequence 89, Application 470 469 469 3.00 0   |  |        |             |            |            |
| 8. US-09-408-646-15 Sequence 157, Application 470 468 468 2.99 0  |  |        |             |            |            |
| 9. US-09-408-646-9 Sequence 9, Application US 464 230 411 1.25 0  | **** 1 standard deviation above mean ****  |        |             |            |            |
| 10. US-09-053-583-9 Sequence 9, Application US 464 230 411 1.25 0 |  |        |             |            |            |

1. US-09-499-662-117 (1-470)  
US-09-408-646-11 Sequence 117, Application US/09408646A

## GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Nakahara, Kaori  
APPLICANT: Tamaki, Ikuko  
APPLICANT: Takahashi, Tohru  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 990540/HG  
CURRENT APPLICATION NUMBER: US/09/408.646A  
CURRENT FILING DATE: 1993-09-30  
EARLIER APPLICATION NUMBER: JP 10-276881  
EARLIER FILING DATE: 1998-09-30  
NUMBER OF SEQ ID NOS: 165  
SEQ ID NO 117  
LENGTH: 470  
TYPE: PRT  
ORGANISM: Artificial Sequence

## FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed heavy  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 470 Optimized Score = 470 Significance = 3.00  
Residue Identity = 100% Matches = 470 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

|   |     |     |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|-----|-----|
| X   | 10  | 20  | 30  | 40  | 50  | 60  | 70  |
| MGWSCILILFLVATATGVHSQVQLVQSGAEVKKPKASVKVSKASGYTFTSYHWQVQKQAPGQGLWNGEIDP |     |     |     |     |     |     |     |
| MGWSCILILFLVATATGVHSQVQLVQSGAEVKKPKASVKVSKASGYTFTSYHWQVQKQAPGQGLWNGEIDP |     |     |     |     |     |     |     |
| X   | 10  | 20  | 30  | 40  | 50  | 60  | 70  |
| SDSYTNNQKFKGKATLTVDSTSTAYMELSSRSEDVAVYCARNDYNNYFDVWGEGTLVTYSSASTK       |     |     |     |     |     |     |     |
| SDSYTNNQKFKGKATLTVDSTSTAYMELSSRSEDVAVYCARNDYNNYFDVWGEGTLVTYSSASTK       |     |     |     |     |     |     |     |
| X   | 80  | 90  | 100 | 110 | 120 | 130 | 140 |
| GPVSFFLAPSSKSTSGTALGCLVKDYFPEPTVSNWNSGALSTGVAHVFPAVQSSGLSLSSVVTVPSSSL   |     |     |     |     |     |     |     |
| GPVSFFLAPSSKSTSGTALGCLVKDYFPEPTVSNWNSGALSTGVAHVFPAVQSSGLSLSSVVTVPSSSL   |     |     |     |     |     |     |     |
| X   | 150 | 160 | 170 | 180 | 190 | 200 | 210 |
| GPVSFFLAPSSKSTSGTALGCLVKDYFPEPTVSNWNSGALSTGVAHVFPAVQSSGLSLSSVVTVPSSSL   |     |     |     |     |     |     |     |
| GPVSFFLAPSSKSTSGTALGCLVKDYFPEPTVSNWNSGALSTGVAHVFPAVQSSGLSLSSVVTVPSSSL   |     |     |     |     |     |     |     |

220 230 240 250 260 270 280  
GTQTYICNVNHNKPSNTKVDKRVKPSCKDKTKHTCPCPAPPELLGSPSVFLPPPKDKTLMISRPEVTCVVVD  
|||||  
GTQTYICNVNHNKPSNTKVDKRVKPSCKDKTKHTCPCPAPPELLGSPSVFLPPPKDKTLMISRPEVTCVVVD  
220 230 240 250 260 270 280  
290 300 310 320 330 340 350 360  
VSHEDPEVKFNWYDGVGEVHNATKPREQYNSTYRVSVLTVLHODWLNKGEYKCKVSNKALPAPIEKTIS  
|||||  
VSHEDPEVKFNWYDGVGEVHNATKPREQYNSTYRVSVLTVLHODWLNKGEYKCKVSNKALPAPIEKTIS  
290 300 310 320 330 340 350 360  
370 380 390 400 410 420 430  
KAKGQPREQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTPPVLDSDGSGFFLYSK  
|||||  
KAKGQPREQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTPPVLDSDGSGFFLYSK  
370 380 390 400 410 420 430  
440 450 460 X  
LTVDKSRWQGNVFCSCVMHEALHNHYTKQSLSPGK  
|||||  
LTVDKSRWQGNVFCSCVMHEALHNHYTKQSLSPGK 470

2. US-09-499-662-117 (1-470)  
US-09-053-583-11 Sequence 117, Application US/09053583A

## Sequence 117, Application US/09053583A

GENERAL INFORMATION:  
APPLICANT: Serizawa, Nobufusa  
APPLICANT: Ichikawa, Kimihisa  
APPLICANT: Ohsumi, Jun  
APPLICANT: Ohtsuki, Masahiko  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Takahashi, Tohru  
APPLICANT: Yoshida, Hiroko  
APPLICANT: Shiraiishi, Akio  
APPLICANT: Yonehara, Shin  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 980126/HG  
CURRENT APPLICATION NUMBER: US/09/053,583A  
CURRENT FILING DATE: 1998-04-01  
EARLIER APPLICATION NUMBER: JP HEI 9-82953  
EARLIER FILING DATE: 1997-04-01  
EARLIER APPLICATION NUMBER: JP HEI 9-169088  
EARLIER FILING DATE: 1997-06-25  
EARLIER APPLICATION NUMBER: JP HEI 9-276064  
EARLIER FILING DATE: 1997-10-08  
NUMBER OF SEQ ID NOS: 123  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 117  
LENGTH: 470  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Designed heavy  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 470 Optimized Score = 470 Significance = 3.00  
Residue Identity = 100% Matches = 470 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X 10 20 30 40 50 60 70  
MGWSCILFLVATATGVHSGVQLVQSGAEVKKPGASVKYSCKASGTYFTSYNMQWVKQAPGQGLEWGEIDP  
|||||  
MGWSCILFLVATATGVHSGVQLVQSGAEVKKPGASVKYSCKASGTYFTSYNMQWVKQAPGQGLEWGEIDP  
X 10 20 30 40 50 60 70

SDSYTNYNOKFKGKATLTVDSTSTAYMELSLRSEDATVYYCARNRDYSNNWYFDWMGEGTLVTVSSASTK  
|||||

SDSYTNYNOKFKGKATLTVDSTSTAYMELSLRSEDATVYYCARNRDYSNNWYFDWMGEGTLVTVSSASTK  
80 90 100 110 120 130 140  
150 160 170 180 190 200 210  
GPSVFPLAPSSKSTSGTAAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVTVPPSSSL  
|||||  
GPSVFPLAPSSKSTSGTAAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVTVPPSSSL  
150 160 170 180 190 200 210  
220 230 240 250 260 270 280  
GTQTYICNVNHNKPSNTKVDKRVKPSCKDKTKHTCPCPAPPELLGSPSVFLPPPKDKTLMISRPEVTCVVVD  
|||||  
GTQTYICNVNHNKPSNTKVDKRVKPSCKDKTKHTCPCPAPPELLGSPSVFLPPPKDKTLMISRPEVTCVVVD  
220 230 240 250 260 270 280  
290 300 310 320 330 340 350 360  
VSHEDPEVKFNWYDGVGEVHNATKPREQYNSTYRVSVLTVLHODWLNKGEYKCKVSNKALPAPIEKTIS  
|||||  
VSHEDPEVKFNWYDGVGEVHNATKPREQYNSTYRVSVLTVLHODWLNKGEYKCKVSNKALPAPIEKTIS  
290 300 310 320 330 340 350 360  
370 380 390 400 410 420 430  
KAKGQPREQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTPPVLDSDGSGFFLYSK  
|||||  
LTVDKSRWQGNVFCSCVMHEALHNHYTKQSLSPGK X  
|||||  
LTVDKSRWQGNVFCSCVMHEALHNHYTKQSLSPGK 470

3. US-09-499-662-117 (1-470)  
US-09-048-646-14 Sequence 147, Application US/09408646A

## Sequence 147, Application US/09408646A

GENERAL INFORMATION:  
APPLICANT: Serizawa, Nobufusa  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Nakahara, Kaori  
APPLICANT: Tamaki, Ikuko  
APPLICANT: Takahashi, Tohru  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 990540/HG  
CURRENT APPLICATION NUMBER: US/09/408,646A  
CURRENT FILING DATE: 1999-09-30  
EARLIER APPLICATION NUMBER: JP 10-276881  
EARLIER FILING DATE: 1998-09-30  
NUMBER OF SEQ ID NOS: 165  
SEQ ID NO 147  
LENGTH: 470  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Designed heavy  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 470 Optimized Score = 470 Significance = 3.00  
Residue Identity = 99% Matches = 468 Mismatches = 1  
Gaps = 0 Conservative Substitutions = 1

X 10 20 30 40 50 60 70  
MGWSCILFLVATATGVHSGVQLVQSGAEVKKPGASVKYSCKASGTYFTSYNMQWVKQAPGQGLEWGEIDP  
|||||  
MGWSCILFLVATATGVHSGVQLVQSGAEVKKPGASVKYSCKASGTYFTSYNMQWVKQAPGQGLEWGEIDP  
X 10 20 30 40 50 60 70

SDSYTNYNOKFKGKATLTVDSTSTAYMELSLRSEDATVYYCARNRDYSNNWYFDWMGEGTLVTVSSASTK  
|||||







```
80      90      100      110      120      130      140
SDSYTNYNQKFKGKATLTVDSTSTAYMELSLRSEDYAVYYCARNRDYNNWYFDVWEGTLVTVSSASTK
|||||
SDSYTNYNQKFKGKATLTVDSTSTAYMELSLRSEDYAVYYCARNRDYNNWYFDVWEGTLVTVSSASTK
80      90      100      110      120      130      140

150      160      170      180      190      200      210
GPSVFLPAPSSKSTSGGTAALGCLVKDYFPEPTVYSWNSGALTSGVHTFPAVLQSSGLYSLSSVTVTPSSSL
|||||
GPSVFLPAPSSKSTSGGTAALGCLVKDYFPEPTVYSWNSGALTSGVHTFPAVLQSSGLYSLSSVTVTPSSSL
150      160      170      180      190      200      210

220      230      240      250      260      270      280
GTQTYICNVNHPKSNKTKVDKRVPEKSCDKTHCPCPAPPELLGGPSVFLFPPKPKDPTLMISRTPEVTCVVD
|||||
GTQTYICNVNHPKSNKTKVDKRVPEKSCDKTHCPCPAPPELLGGPSVFLFPPKPKDPTLMISRTPEVTCVVD
220      230      240      250      260      270      280

290      300      310      320      330      340      350      360
VSHEDPEVKFNMYVDGVEVHNNAKTPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTIS
|||||
VSHEDPEVKFNMYVDGVEVHNNAKTPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTIS
290      300      310      320      330      340      350      360

370      380      390      400      410      420      430
KAKGPREPOVYTLPPSREEMTKNOVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSDGSGFFLYSK
|||||
KAKGPREPOVYTLPPSREEMTKNOVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSDGSGFFLYSK
370      380      390      400      410      420      430

440      450      460      X
LTVDKSRMQQGNVFSCSVNHEALHNNHYTKOKLSLSPGK
|||||
LTVDKSRMQQGNVFSCSVNHEALHNNHYTKOKLSLSPGK
440      450      460      470
```

8. US-09-499-662-117 (1-470)  
US-09-408-646-15 Sequence 157, Application US/09408646A

Sequence 157, Application US/09408646A

GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Nakahara, Kaori  
APPLICANT: Tamaki, Ikuko  
APPLICANT: Takahashi, Tohru  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 990540/HG  
CURRENT APPLICATION NUMBER: US/09/408,646A  
CURRENT FILING DATE: 1999-09-30  
EARLIER APPLICATION NUMBER: JP 10-276881  
EARLIER FILING DATE: 1998-09-30  
NUMBER OF SEQ ID NOS: 165  
SEQ ID NO 157  
LENGTH: 470  
TYPE: PRT  
ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed  
OTHER INFORMATION: heavy chain of humanized anti-Fas antibody

Initial Score = 468 Optimized Score = 468 Significance = 2.99  
Residue Identity = 98% Matches = 465 Mismatches = 3  
Gaps = 0 Conservative Substitutions = 2

```
X      10      20      30      40      50      60      70
MGWSCIIILFLVATATGVSQVGVSGAEVKKPGASVKVSCKASGYTFSTSYMMQWVQKAPGGGLEWMGEIDP
|||||
MGWSCIIILFLVATATGVSQVGVSGAEVKKPGASVKVSCKASGYTFSTSYMMQWVQKAPGGGLEWMGEIDP
X      10      20      30      40      50      60      70
```

```
80      90      100      110      120      130      140
SDSYTNYNQKFKGKATLTVDSTSTAYMELSLRSEDYAVYYCARNRDYNNWYFDVWEGTLVTVSSASTK
|||||
SDSYTNYNQKFKGKATLTVDSTSTAYMELSLRSEDYAVYYCARNRDYNNWYFDVWEGTLVTVSSASTK
80      90      100      110      120      130      140

150      160      170      180      190      200      210
GPSVFLPAPSSKSTSGGTAALGCLVKDYFPEPTVYSWNSGALTSGVHTFPAVLQSSGLYSLSSVTVTPSSSL
|||||
GPSVFLPAPSSKSTSGGTAALGCLVKDYFPEPTVYSWNSGALTSGVHTFPAVLQSSGLYSLSSVTVTPSSSL
150      160      170      180      190      200      210

220      230      240      250      260      270      280
GTQTYICNVNHPKSNKTKVDKRVPEKSCDKTHCPCPAPPELLGGPSVFLFPPKPKDPTLMISRTPEVTCVVD
|||||
GTQTYICNVNHPKSNKTKVDKRVPEKSCDKTHCPCPAPPELLGGPSVFLFPPKPKDPTLMISRTPEVTCVVD
220      230      240      250      260      270      280

290      300      310      320      330      340      350      360
VSHEDPEVKFNMYVDGVEVHNNAKTPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTIS
|||||
VSHEDPEVKFNMYVDGVEVHNNAKTPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTIS
290      300      310      320      330      340      350      360

370      380      390      400      410      420      430
KAKGPREPOVYTLPPSREEMTKNOVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSDGSGFFLYSK
|||||
KAKGPREPOVYTLPPSREEMTKNOVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSDGSGFFLYSK
370      380      390      400      410      420      430

440      450      460      X
LTVDKSRMQQGNVFSCSVNHEALHNNHYTKOKLSLSPGK
|||||
LTVDKSRMQQGNVFSCSVNHEALHNNHYTKOKLSLSPGK
440      450      460      470
```

9. US-09-499-662-117 (1-470)  
US-09-408-646-9 Sequence 9, Application US/09408646A

Sequence 9, Application US/09408646A

GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Nakahara, Kaori  
APPLICANT: Tamaki, Ikuko  
APPLICANT: Takahashi, Tohru  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 990540/HG  
CURRENT APPLICATION NUMBER: US/09/408,646A  
CURRENT FILING DATE: 1999-09-30  
EARLIER APPLICATION NUMBER: JP 10-276881  
EARLIER FILING DATE: 1998-09-30  
NUMBER OF SEQ ID NOS: 165  
SEQ ID NO 9  
LENGTH: 464  
TYPE: PRT  
ORGANISM: Mus musculus

Initial Score = 230 Optimized Score = 411 Significance = 1.25  
Residue Identity = 70% Matches = 332 Mismatches = 107  
Gaps = 6 Conservative Substitutions = 25

```
X      10      20      30      40      50      60      70
MGWSCIIILFLVATATGVSQVGVSGAEVKKPGASVKVSCKASGYTFSTSYMMQWVQKAPGGGLEWMGEIDP
|||||
MGWSCIIILFLVATATGVSQVGVSGAEVKKPGASVKVSCKASGYTFSTSYMMQWVQKAPGGGLEWMGEIDP
X      10      20      30      40      50      60      70

80      90      100      110      120      130      140
SDSYTNYNQKFKGKATLTVDSTSTAYMELSLRSEDYAVYYCARNRDYNNWYFDVWEGTLVTVSSASTK
|||||
SDSYTNYNQKFKGKATLTVDSTSTAYMELSLRSEDYAVYYCARNRDYNNWYFDVWEGTLVTVSSAKTT
```





GENERAL INFORMATION:  
APPLICANT: Serizawa, Nobufusa  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Nakahara, Kaori  
APPLICANT: Tamaki, Ikuko

TITLE OF INVENTION: Anti-Fas Antibodies  
 FILE REFERENCE: 980126/HG  
 CURRENT APPLICATION NUMBER: US/09/053,583A  
 CURRENT FILING DATE: 1998-04-01  
 EARLIER APPLICATION NUMBER: JP HEI 9-82953  
 EARLIER FILING DATE: 1997-04-01  
 EARLIER APPLICATION NUMBER: JP HEI 9-159088  
 EARLIER FILING DATE: 1997-06-25  
 EARLIER APPLICATION NUMBER: JP HEI 9-276064  
 EARLIER FILING DATE: 1997-10-08  
 NUMBER OF SEQ ID NOS: 123  
 SOFTWARE: PatentIn Ver. 2.0  
 SEQ ID NO 50  
 LENGTH: 238

TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Designed light  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 237 Optimized Score = 237 Significance = 2.24  
Residue Identity = 98% Matches = 235 Mismatches = 1  
Gaps = 0 Conservative Substitutions = 2

X 10 20 30 40 50 60 70  
METDTLLWLLVLPVPGSTGEIVLTQSPGTLSPGERATLSCASQSDYDGDSDYMNWYQOKPGQAPRLLI  
|||||  
METDTLLWLLVLPVPGSTGEIVLTQSPGTLSPGERATLSCASQSDYDGDSDYMNWYQOKPGQAPRLLI  
X 10 20 30 40 50 60 70

80 90 100 110 120 130 140  
YAASNLGSGIPDRFSGSGGTDTLTISRLEPEDFAVYCCQSNEDPRTFGGQTKLEIKRTVAAPSVFIAPP  
|||||  
YAASNLGSGIPDRFSGSGGTDTLTISRLEPEDFAVYCCQSNEDPRTFGGQTKLEIKRTVAAPSVFIAPP  
80 90 100 110 120 130 140

150 160 170 180 190 200 210  
SDEQLKSGTASVVCLLNNFPYPREAKVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYKHKVY  
|||||  
SDEQLKSGTASVVCLLNNFPYPREAKVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYKHKVY  
150 160 170 180 190 200 210

220 230 X  
ACEVTHQGLSSPVTKSFNRGEC  
|||||  
ACEVTHQGLSSPVTKSFNRGEC  
220 230 X

5. US-09-499-662-107 (1-238)  
US-09-408-646-10 Sequence 109, Application US/09408646A

Sequence 109, Application US/09408646A  
GENERAL INFORMATION:  
APPLICANT: Serizawa, Nobufusa  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Nakahara, Kaori  
APPLICANT: Takahashi, Ikuko  
APPLICANT: Takahashi, Tohru  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 990540/HG  
CURRENT APPLICATION NUMBER: US/09/408,646A  
CURRENT FILING DATE: 1999-09-30  
EARLIER APPLICATION NUMBER: JP 10-276881  
EARLIER FILING DATE: 1998-09-30  
NUMBER OF SEQ ID NOS: 165  
SEQ ID NO 109

LENGTH: 238  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Designed light  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 234 Optimized Score = 234 Significance = 2.20  
Residue Identity = 97% Matches = 232 Mismatches = 6  
Gaps = 0 Conservative Substitutions = 0

X 10 20 30 40 50 60 70  
METDTLLWLLVLPVPGSTGEIVLTQSPGTLSPGERATLSCASQSDYDGDSDYMNWYQOKPGQAPRLLI  
|||||  
METDTLLWLLVLPVPGSTGEIVLTQSPGTLSPGERATLSCASQSDYDGDSDYMNWYQOKPGQAPRLLI  
X 10 20 30 40 50 60 70

80 90 100 110 120 130 140  
YAASNLGSGIPDRFSGSGGTDTLTISRLEPEDFAVYCCQSNEDPRTFGGQTKLEIKRTVAAPSVFIAPP  
|||||

80 90 100 110 120 130 140  
YAASNLGSGIPDRFSGSGGTDTLTISRLEPEDFAVYCCQSNEDPRTFGGQTKLEIKRTVAAPSVFIAPP  
150 160 170 180 190 200 210  
SDEQLKSGTASVVCLLNNFPYPREAKVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYKHKVY  
|||||  
SDEQLKSGTASVVCLLNNFPYPREAKVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYKHKVY  
150 160 170 180 190 200 210

220 230 X  
ACEVTHQGLSSPVTKSFNRGEC  
|||||  
ACEVTHQGLSSPVTKSFNRGEC  
220 230 X

6. US-09-499-662-107 (1-238)  
US-09-408-646-52 Sequence 52, Application US/09408646A

Sequence 52, Application US/09408646A  
GENERAL INFORMATION:  
APPLICANT: Serizawa, Nobufusa  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Nakahara, Kaori  
APPLICANT: Takahashi, Ikuko  
APPLICANT: Takahashi, Tohru  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 990540/HG  
CURRENT APPLICATION NUMBER: US/09/408,646A  
CURRENT FILING DATE: 1999-09-30  
EARLIER APPLICATION NUMBER: JP 10-276881  
EARLIER FILING DATE: 1998-09-30  
NUMBER OF SEQ ID NOS: 165  
SEQ ID NO 52

LENGTH: 238  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed light  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 234 Optimized Score = 234 Significance = 2.20  
Residue Identity = 96% Matches = 230 Mismatches = 6  
Gaps = 0 Conservative Substitutions = 2

X 10 20 30 40 50 60 70  
METDTLLWLLVLPVPGSTGEIVLTQSPGTLSPGERATLSCASQSDYDGDSDYMNWYQOKPGQAPRLLI  
|||||  
METDTLLWLLVLPVPGSTGEIVLTQSPGTLSPGERATLSCASQSDYDGDSDYMNWYQOKPGQAPRLLI  
X 10 20 30 40 50 60 70

80 90 100 110 120 130 140  
YAASNLGSGIPDRFSGSGGTDTLTISRLEPEDFAVYCCQSNEDPRTFGGQTKLEIKRTVAAPSVFIAPP  
|||||  
YAASNLGSGIPDRFSGSGGTDTLTISRLEPEDFAVYCCQSNEDPRTFGGQTKLEIKRTVAAPSVFIAPP  
80 90 100 110 120 130 140

150 160 170 180 190 200 210  
SDEQLKSGTASVVCLLNNFPYPREAKVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYKHKVY  
|||||  
SDEQLKSGTASVVCLLNNFPYPREAKVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYKHKVY  
150 160 170 180 190 200 210

220 230 X  
ACEVTHQGLSSPVTKSFNRGEC  
|||||  
ACEVTHQGLSSPVTKSFNRGEC  
220 230 X

7. US-09-499-662-107 (1-238)  
US-09-053-583-10 Sequence 109, Application US/09053583A

## Sequence 109, Application US/09053583A

## GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa  
APPLICANT: Ichikawa, Kimihisa  
APPLICANT: Ohsumi, Jun  
APPLICANT: Ohtsuki, Masahiko  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Takahashi, Tohru  
APPLICANT: Yoshida, Hiroko  
APPLICANT: Shiraiishi, Akio  
APPLICANT: Yonehara, Shin  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 980126/HG  
CURRENT APPLICATION NUMBER: US/09/053,583A  
CURRENT FILING DATE: 1998-04-01  
EARLIER APPLICATION NUMBER: JP HEI 9-82953  
EARLIER FILING DATE: 1997-04-01  
EARLIER APPLICATION NUMBER: JP HEI 9-169088  
EARLIER FILING DATE: 1997-06-25  
EARLIER APPLICATION NUMBER: JP HEI 9-276064  
EARLIER FILING DATE: 1997-10-08  
NUMBER OF SEQ ID NOS: 123  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 109  
LENGTH: 238  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Designed light  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 234 Optimized Score = 234 Significance = 2.20  
Residue Identity = 97% Matches = 232 Mismatches = 6  
Gaps = 0 Conservative Substitutions = 0

X 10 20 30 40 50 60 70  
METDTILLVLLWVPGSGEIVLTQSPGTLSPGERATLSCASQSYDYGDSYNNYQOKPGQAPRLLI  
|||||  
METDTILLVLLWVPGSGEIVLTQSPGTLSPGERATLSCASQSYDYGDSYNNYQOKPGQAPRLLI  
X 10 20 30 40 50 60 70

80 90 100 110 120 130 140  
YAASNLESGIPDRFSGSGGTDTLTISRLEPEDFAVYYCQOSNEDPRTFGQGTKEIKRTVAAPSVFIIPP  
|||||  
YAASNLESGIPDRFSGSGGTDTLTISRLEPEDFAVYYCQOSNEDPRTFGQGTKEIKRTVAAPSVFIIPP  
80 90 100 110 120 130 140

150 160 170 180 190 200 210  
SDQLKSGTASVVCLLNNFPYPRKQVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYEKHKVY  
SDQLKSGTASVVCLLNNFPYPRKQVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYEKHKVY  
150 160 170 180 190 200 210

220 230 X  
ACEVTHQGLSSPVTKSFNRGEC  
|||||  
ACEVTHQGLSSPVTKSFNRGEC  
220 230 X

## 8. US-09-499-662-107 (1-238)

Sequence 52, Application US/09053583A

## GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa  
APPLICANT: Ichikawa, Kimihisa  
APPLICANT: Ohsumi, Jun  
APPLICANT: Ohtsuki, Masahiko  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Takahashi, Tohru  
APPLICANT: Yoshida, Hiroko  
APPLICANT: Shiraiishi, Akio

APPLICANT: Yonehara, Shin  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 980126/HG  
CURRENT APPLICATION NUMBER: US/09/053,583A  
CURRENT FILING DATE: 1998-04-01  
EARLIER APPLICATION NUMBER: JP HEI 9-82953  
EARLIER FILING DATE: 1997-04-01  
EARLIER APPLICATION NUMBER: JP HEI 9-169088  
EARLIER FILING DATE: 1997-06-25  
EARLIER APPLICATION NUMBER: JP HEI 9-276064  
EARLIER FILING DATE: 1997-10-08  
NUMBER OF SEQ ID NOS: 123  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 52  
LENGTH: 238  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Designed light  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 234 Optimized Score = 234 Significance = 2.20  
Residue Identity = 96% Matches = 230 Mismatches = 6  
Gaps = 0 Conservative Substitutions = 2

X 10 20 30 40 50 60 70  
METDTILLVLLWVPGSGEIVLTQSPGTLSPGERATLSCASQSYDYGDSYNNYQOKPGQAPRLLI  
|||||  
METDTILLVLLWVPGSGEIVLTQSPGTLSPGERATLSCASQSYDYGDSYNNYQOKPGQAPRLLI  
X 10 20 30 40 50 60 70

80 90 100 110 120 130 140  
YAASNLESGIPDRFSGSGGTDTLTISRLEPEDFAVYYCQOSNEDPRTFGQGTKEIKRTVAAPSVFIIPP  
|||||  
YAASNLESGIPDRFSGSGGTDTLTISRLEPEDFAVYYCQOSNEDPRTFGQGTKEIKRTVAAPSVFIIPP  
80 90 100 110 120 130 140

150 160 170 180 190 200 210  
SDQLKSGTASVVCLLNNFPYPRKQVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYEKHKVY  
SDQLKSGTASVVCLLNNFPYPRKQVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYEKHKVY  
150 160 170 180 190 200 210

220 230 X  
ACEVTHQGLSSPVTKSFNRGEC  
|||||  
ACEVTHQGLSSPVTKSFNRGEC  
220 230 X

## 9. US-09-499-662-107 (1-238)

Sequence 129, Application US/09408646A

## GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Nakahara, Kaori  
APPLICANT: Tamaki, Ikuko  
APPLICANT: Takahashi, Tohru  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 990540/HG  
CURRENT APPLICATION NUMBER: US/09/408,646A  
CURRENT FILING DATE: 1999-09-30  
EARLIER APPLICATION NUMBER: JP 10-276881  
EARLIER FILING DATE: 1998-09-30  
NUMBER OF SEQ ID NOS: 165  
SEQ ID NO 129  
LENGTH: 238  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Designed light







| Sequence Name | Description | Init. Opt. | Length | Score | Sig. | Frame |
|---------------|-------------|------------|--------|-------|------|-------|
|---------------|-------------|------------|--------|-------|------|-------|

GENERAL INFORMATION:  
APPLICANT: Serizawa, Nobufusa  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Nakahara, Kaori  
APPLICANT: Tamaki, Ikuko

LENGTH: 238

TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Designed light  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 237 Optimized Score = 237 Significance = 2.24  
Residue Identity = 98% Matches = 235 Mismatches = 1  
Gaps = 0 Conservative Substitutions = 2

X 10 20 30 40 50 60 70  
METDTILLWLLWVPGSTGDIVLTQSPTLSLSPGERATLSCKASQSDYDGDSDSYMMWYQKPGQAPRLLI  
|||||  
METDTILLWLLWVPGSTGDIVLTQSPTLSLSPGERATLSCKASQSDYDGDSDSYMMWYQKPGQAPRLLI  
X 10 20 30 40 50 60 70

80 90 100 110 120 130 140  
YAASNLESGIPDRFSGSGGDTFTLTISRLEPADFAVYVYCOQSNEDPRTFGGTRLEIKRTVAAPSVFIAPP  
YAASNLESGIPDRFSGSGGDTFTLTISRLEPADFAVYVYCOQSNEDPRTFGGTRLEIKRTVAAPSVFIAPP  
80 90 100 110 120 130 140

150 160 170 180 190 200 210  
SDEQLKSGTASVVCLLNNFYPREAKVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYERHKVY  
|||||  
SDEQLKSGTASVVCLLNNFYPREAKVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYERHKVY  
150 160 170 180 190 200 210

220 230 X  
ACEVTHOGLSSPVTKSFNRGEC  
|||||  
ACEVTHOGLSSPVTKSFNRGEC  
220 230 X

5. US-09-499-662-50 (1-238)  
US-09-408-646-10 Sequence 109, Application US/09408646A

Sequence 109, Application US/09408646A  
GENERAL INFORMATION:  
APPLICANT: Serizawa, Nobufusa  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Nakahara, Kaori  
APPLICANT: Tamaki, Ikuo  
APPLICANT: Takahashi, Tohru  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 990540/HG  
CURRENT APPLICATION NUMBER: US/09/408,646A  
CURRENT FILING DATE: 1999-09-30  
EARLIER APPLICATION NUMBER: JP 10-276881  
EARLIER FILING DATE: 1998-09-30  
NUMBER OF SEQ ID NOS: 165  
SEQ ID NO 109  
LENGTH: 238  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Designed light  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 234 Optimized Score = 234 Significance = 2.20  
Residue Identity = 96% Matches = 229 Mismatches = 7  
Gaps = 0 Conservative Substitutions = 2

X 10 20 30 40 50 60 70  
METDTILLWLLWVPGSTGDIVLTQSPTLSLSPGERATLSCKASQSDYDGDSDSYMMWYQKPGQAPRLLI  
|||||  
METDTILLWLLWVPGSTGDIVLTQSPTLSLSPGERATLSCKASQSDYDGDSDSYMMWYQKPGQAPRLLI  
X 10 20 30 40 50 60 70

80 90 100 110 120 130 140  
YAASNLESGIPDRFSGSGGDTFTLTISRLEPADFAVYVYCOQSNEDPRTFGGTRLEIKRTVAAPSVFIAPP  
YAASNLESGIPDRFSGSGGDTFTLTISRLEPADFAVYVYCOQSNEDPRTFGGTRLEIKRTVAAPSVFIAPP  
80 90 100 110 120 130 140

150 160 170 180 190 200 210  
SDEQLKSGTASVVCLLNNFYPREAKVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYERHKVY  
|||||  
SDEQLKSGTASVVCLLNNFYPREAKVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYERHKVY  
150 160 170 180 190 200 210

220 230 X  
ACEVTHOGLSSPVTKSFNRGEC  
|||||  
ACEVTHOGLSSPVTKSFNRGEC  
220 230 X

6. US-09-499-662-50 (1-238)  
US-09-408-646-54 Sequence 54, Application US/09408646A

Sequence 54, Application US/09408646A  
GENERAL INFORMATION:  
APPLICANT: Serizawa, Nobufusa  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Nakahara, Kaori  
APPLICANT: Tamaki, Ikuo  
APPLICANT: Takahashi, Tohru  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 990540/HG  
CURRENT APPLICATION NUMBER: US/09/408,646A  
CURRENT FILING DATE: 1999-09-30  
EARLIER APPLICATION NUMBER: JP 10-276881  
EARLIER FILING DATE: 1998-09-30  
NUMBER OF SEQ ID NOS: 165  
SEQ ID NO 54  
LENGTH: 238  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Designed light  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 234 Optimized Score = 234 Significance = 2.20  
Residue Identity = 96% Matches = 229 Mismatches = 8  
Gaps = 0 Conservative Substitutions = 1

X 10 20 30 40 50 60 70  
METDTILLWLLWVPGSTGDIVLTQSPTLSLSPGERATLSCKASQSDYDGDSDSYMMWYQKPGQAPRLLI  
|||||  
METDTILLWLLWVPGSTGDIVLTQSPTLSLSPGERATLSCKASQSDYDGDSDSYMMWYQKPGQAPRLLI  
X 10 20 30 40 50 60 70

80 90 100 110 120 130 140  
YAASNLESGIPDRFSGSGGDTFTLTISRLEPADFAVYVYCOQSNEDPRTFGGTRLEIKRTVAAPSVFIAPP  
YAASNLESGIPDRFSGSGGDTFTLTISRLEPADFAVYVYCOQSNEDPRTFGGTRLEIKRTVAAPSVFIAPP  
80 90 100 110 120 130 140

150 160 170 180 190 200 210  
SDEQLKSGTASVVCLLNNFYPREAKVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYERHKVY  
|||||  
SDEQLKSGTASVVCLLNNFYPREAKVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYERHKVY  
150 160 170 180 190 200 210

220 230 X  
ACEVTHOGLSSPVTKSFNRGEC  
|||||  
ACEVTHOGLSSPVTKSFNRGEC  
220 230 X

7. US-09-499-662-50 (1-238)  
US-09-408-646-52 Sequence 52, Application US/09408646A

Sequence 52, Application US/09408646A

GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Nakahara, Kaori  
APPLICANT: Tamaki, Ikuko  
APPLICANT: Takahashi, Tohru  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 990540/HG  
CURRENT APPLICATION NUMBER: US/09/408,646A  
CURRENT FILING DATE: 1999-09-30  
EARLIER APPLICATION NUMBER: JP 10-276881  
EARLIER FILING DATE: 1998-09-30  
NUMBER OF SEQ ID NOS: 165

SEQ ID NO 52

LENGTH: 238

TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed light  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 234 Optimized Score = 234 Significance = 2.20  
Residue Identity = 97% Matches = 231 Mismatches = 7  
Gaps = 0 Conservative Substitutions = 0

X 10 20 30 40 50 60 70  
METDTLLWVLLWVPGSGDGLVLTQSPGTLSPGERATLSCSKASQSYVDYDGDSDYNNYQKPGQAPRLLI  
|||||  
METDTLLWVLLWVPGSGDGLVLTQSPGTLSPGERATLSCSKASQSYVDYDGDSDYNNYQKPGQAPRLLI  
X 10 20 30 40 50 60 70

80 90 100 110 120 130 140  
YAASNLESGIPDRFSGSGGTDFLTITISRLPEADFAVYYCQOSNEDPRTFGGQTRLEIKRTVAAPSVFIFPP  
|||||  
YAASNLESGIPDRFSGSGGTDFLTITISRLPEADFAVYYCQOSNEDPRTFGGQTRLEIKRTVAAPSVFIFPP  
80 90 100 110 120 130 140

150 160 170 180 190 200 210  
SDEQLKSGTASVYVCLLNFPYPRKAVQWVDNALQSGNSQESVTEQDSKDSYSLSSITLTLSKADYKHKVY  
|||||  
SDEQLKSGTASVYVCLLNFPYPRKAVQWVDNALQSGNSQESVTEQDSKDSYSLSSITLTLSKADYKHKVY  
150 160 170 180 190 200 210

220 230 X  
ACEVTHQGLSSPVTKSFNRGEC  
|||||  
ACEVTHQGLSSPVTKSFNRGEC  
220 230 X

8. US-09-499-662-50 (1-238)

US-09-053-583-10 Sequence 109, Application US/09053583A

Sequence 109, Application US/09053583A

GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa  
APPLICANT: Ichikawa, Kimihisa  
APPLICANT: Ohsumi, Jun  
APPLICANT: Ohtsuki, Masahiko  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Takahashi, Tohru  
APPLICANT: Yoshida, Hiroko  
APPLICANT: Shiraishi, Akio  
APPLICANT: Yonehara, Shin  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 980126/HG  
CURRENT APPLICATION NUMBER: US/09/053,583A  
CURRENT FILING DATE: 1998-04-01  
EARLIER APPLICATION NUMBER: JP HEI 9-82953  
EARLIER FILING DATE: 1997-04-01  
EARLIER APPLICATION NUMBER: JP HEI 9-169088  
EARLIER FILING DATE: 1997-06-25

EARLIER APPLICATION NUMBER: JP HEI 9-276064

EARLIER FILING DATE: 1997-10-08

NUMBER OF SEQ ID NOS: 123

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 109

LENGTH: 238

TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed light  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 234 Optimized Score = 234 Significance = 2.20  
Residue Identity = 96% Matches = 229 Mismatches = 7  
Gaps = 0 Conservative Substitutions = 2

X 10 20 30 40 50 60 70  
METDTLLWVLLWVPGSGDGLVLTQSPGTLSPGERATLSCSKASQSYVDYDGDSDYNNYQKPGQAPRLLI  
|||||  
METDTLLWVLLWVPGSGDGLVLTQSPGTLSPGERATLSCSKASQSYVDYDGDSDYNNYQKPGQAPRLLI  
X 10 20 30 40 50 60 70

80 90 100 110 120 130 140  
YAASNLESGIPDRFSGSGGTDFLTITISRLPEADFAVYYCQOSNEDPRTFGGQTRLEIKRTVAAPSVFIFPP  
|||||  
YAASNLESGIPDRFSGSGGTDFLTITISRLPEADFAVYYCQOSNEDPRTFGGQTRLEIKRTVAAPSVFIFPP  
80 90 100 110 120 130 140

150 160 170 180 190 200 210  
SDEQLKSGTASVYVCLLNFPYPRKAVQWVDNALQSGNSQESVTEQDSKDSYSLSSITLTLSKADYKHKVY  
|||||  
SDEQLKSGTASVYVCLLNFPYPRKAVQWVDNALQSGNSQESVTEQDSKDSYSLSSITLTLSKADYKHKVY  
150 160 170 180 190 200 210

220 230 X  
ACEVTHQGLSSPVTKSFNRGEC  
|||||  
ACEVTHQGLSSPVTKSFNRGEC  
220 230 X

9. US-09-499-662-50 (1-238)

US-09-053-583-54 Sequence 54, Application US/09053583A

Sequence 54, Application US/09053583A

GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa  
APPLICANT: Ichikawa, Kimihisa  
APPLICANT: Ohsumi, Jun  
APPLICANT: Ohtsuki, Masahiko  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Takahashi, Tohru  
APPLICANT: Yoshida, Hiroko  
APPLICANT: Shiraishi, Akio  
APPLICANT: Yonehara, Shin  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 980126/HG  
CURRENT APPLICATION NUMBER: US/09/053,583A  
CURRENT FILING DATE: 1998-04-01  
EARLIER APPLICATION NUMBER: JP HEI 9-82953  
EARLIER FILING DATE: 1997-04-01  
EARLIER APPLICATION NUMBER: JP HEI 9-169088  
EARLIER FILING DATE: 1997-06-25  
EARLIER APPLICATION NUMBER: JP HEI 9-276064  
EARLIER FILING DATE: 1997-10-08  
NUMBER OF SEQ ID NOS: 123  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 54  
LENGTH: 238  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed light

OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 234 Optimized Score = 234 Significance = 2.20  
Residue Identity = 96% Matches = 229 Mismatches = 8  
Gaps = 0 Conservative Substitutions = 1

X 10 20 30 40 50 60 70  
METDTILLWLLWPGSGTDIVLTQSPGTTLSLSPGERATLSCSKASQSDYDGDSDYMNWYQOKPGQAPRLLI  
|||||  
METDTILLWLLWPGSGTDIVLTQSPGTTLSLSPGERATLSCSKASQSDYDGDSDYMNWYQOKPGQAPRLLI  
X 10 20 30 40 50 60 70

80 90 100 110 120 130 140  
YAASNLESGIPDRFSGSGGTDTLTISRLPEADFAVYYCQOSNEDPRTFGGTRLEIKRTVAAPSVFIAPP  
|||||  
YAASNLESGIPDRFSGSGGTDTLTIHVPEEEDAATYYCQOSNEDPRTFGGTRLEIKRTVAAPSVFIAPP  
80 90 100 110 120 130 140

150 160 170 180 190 200 210  
SDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYKHKVY  
|||||  
SDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYKHKVY  
150 160 170 180 190 200 210

220 230 X  
ACEVTHQGLSSPVTKSFNRGEC  
|||||  
ACEVTHQGLSSPVTKSFNRGEC  
220 230 X

10. US-09-499-662-50 (1-238)  
US-09-053-583-52 Sequence 52, Application US/09053583A

Sequence 52, Application US/09053583A

GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa  
APPLICANT: Ichikawa, Kimihisa  
APPLICANT: Ohsumi, Jun  
APPLICANT: Ohtsuki, Masahiko  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Takahashi, Tohru  
APPLICANT: Yoshida, Hiroko  
APPLICANT: Shiraishi, Akio  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 980126/HG  
CURRENT APPLICATION NUMBER: US/09/053,583A  
CURRENT FILING DATE: 1998-04-01  
EARLIER APPLICATION NUMBER: JP HEI 9-82953  
EARLIER FILING DATE: 1997-04-01  
EARLIER APPLICATION NUMBER: JP HEI 9-169088  
EARLIER FILING DATE: 1997-06-25  
EARLIER APPLICATION NUMBER: JP HEI 9-276064  
NUMBER OF SEQ ID NOS: 123  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 52  
LENGTH: 238  
TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed light  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 234 Optimized Score = 234 Significance = 2.20  
Residue Identity = 97% Matches = 231 Mismatches = 7  
Gaps = 0 Conservative Substitutions = 0

X 10 20 30 40 50 60 70  
METDTILLWLLWPGSGTDIVLTQSPGTTLSLSPGERATLSCSKASQSDYDGDSDYMNWYQOKPGQAPRLLI  
|||||  
METDTILLWLLWPGSGTDIVLTQSPGTTLSLSPGERATLSCSKASQSDYDGDSDYMNWYQOKPGQAPRLLI





220 230 X  
ACEVTHQGLSSPVTKSFNRGEC  
|||||  
ACEVTHQGLSSPVTKSFNRGEC  
220 230 X

2. US-09-499-662-52 (1-238)  
US-09-053-583-52 Sequence 52, Application US/09053583A

Sequence 52, Application US/09053583A

GENERAL INFORMATION:  
APPLICANT: Serizawa, Nobufusa  
APPLICANT: Ichikawa, Kimihisa  
APPLICANT: Ohsumi, Jun  
APPLICANT: Ohtsuki, Masahiko  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Takahashi, Tohru  
APPLICANT: Yoshida, Hiroko  
APPLICANT: Shiraiishi, Akio  
APPLICANT: Yonehara, Shin

TITLE OF INVENTION: Anti-Fas Antibodies

FILE REFERENCE: 980126/HG

CURRENT APPLICATION NUMBER: US/09/053.583A

EARLIER FILING DATE: 1998-04-01

EARLIER APPLICATION NUMBER: JP HEI 9-82953

EARLIER FILING DATE: 1997-04-01

EARLIER APPLICATION NUMBER: JP HEI 9-169088

EARLIER FILING DATE: 1997-06-25

EARLIER APPLICATION NUMBER: JP HEI 9-276064

EARLIER FILING DATE: 1997-10-08

NUMBER OF SEQ ID NOS: 123

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 52

LENGTH: 238

TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed light  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 238 Optimized Score = 238 Significance = 2.24  
Residue Identity = 100% Matches = 238 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X 10 20 30 40 50 60 70  
METDITLLWVLLWVPGSTGDIVLTQSPGTLSLSPGERATLSCASQSDYDGDSDYNNWYQOKPGQAPRLLI  
|||||  
METDITLLWVLLWVPGSTGDIVLTQSPGTLSLSPGERATLSCASQSDYDGDSDYNNWYQOKPGQAPRLLI  
X 10 20 30 40 50 60 70

80 90 100 110 120 130 140  
YAASNLESGIPDRFSGSGGTDFLTTHHPVEEEDAATYYCQSNEDPRTFGQGTREIKRTVAAPSVFIFPP  
|||||  
YAASNLESGIPDRFSGSGGTDFLTTHHPVEEEDAATYYCQSNEDPRTFGQGTREIKRTVAAPSVFIFPP  
80 90 100 110 120 130 140

150 160 170 180 190 200 210  
SDEQLKSGTASVVCVLLNPNYPREKQVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYEKHKVY  
|||||  
SDEQLKSGTASVVCVLLNPNYPREKQVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYEKHKVY  
150 160 170 180 190 200 210

220 230 X  
ACEVTHQGLSSPVTKSFNRGEC  
|||||  
ACEVTHQGLSSPVTKSFNRGEC  
220 230 X

3. US-09-499-662-52 (1-238)  
US-09-408-646-10 Sequence 109, Application US/09408646A

Sequence 109, Application US/09408646A  
GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Nakanahara, Kaori  
APPLICANT: Tamaki, Ikuko

TITLE OF INVENTION: Anti-Fas Antibodies

FILE REFERENCE: 990540/HG

CURRENT APPLICATION NUMBER: US/09/408.646A

EARLIER FILING DATE: 1999-09-30

EARLIER APPLICATION NUMBER: JP 10-276881

EARLIER FILING DATE: 1998-09-30

NUMBER OF SEQ ID NOS: 165

SEQ ID NO 109

LENGTH: 238

TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed light  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 238 Optimized Score = 238 Significance = 2.24  
Residue Identity = 99% Matches = 236 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 2

X 10 20 30 40 50 60 70  
METDITLLWVLLWVPGSTGDIVLTQSPGTLSLSPGERATLSCASQSDYDGDSDYNNWYQOKPGQAPRLLI  
|||||  
METDITLLWVLLWVPGSTGDIVLTQSPGTLSLSPGERATLSCASQSDYDGDSDYNNWYQOKPGQAPRLLI  
X 10 20 30 40 50 60 70

80 90 100 110 120 130 140  
YAASNLESGIPDRFSGSGGTDFLTTHHPVEEEDAATYYCQSNEDPRTFGQGTREIKRTVAAPSVFIFPP  
|||||  
YAASNLESGIPDRFSGSGGTDFLTTHHPVEEEDAATYYCQSNEDPRTFGQGTREIKRTVAAPSVFIFPP  
80 90 100 110 120 130 140

150 160 170 180 190 200 210  
SDEQLKSGTASVVCVLLNPNYPREKQVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYEKHKVY  
|||||  
SDEQLKSGTASVVCVLLNPNYPREKQVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYEKHKVY  
150 160 170 180 190 200 210

220 230 X  
ACEVTHQGLSSPVTKSFNRGEC  
|||||  
ACEVTHQGLSSPVTKSFNRGEC  
220 230 X

4. US-09-499-662-52 (1-238)  
US-09-053-583-10 Sequence 109, Application US/09053583A

Sequence 109, Application US/09053583A

GENERAL INFORMATION:  
APPLICANT: Serizawa, Nobufusa  
APPLICANT: Ichikawa, Kimihisa  
APPLICANT: Ohsumi, Jun

APPLICANT: Ohtsuki, Masahiko

APPLICANT: Haruyama, Hideyuki

APPLICANT: Takahashi, Tohru

APPLICANT: Yoshida, Hiroko

APPLICANT: Shiraiishi, Akio

APPLICANT: Yonehara, Shin

TITLE OF INVENTION: Anti-Fas Antibodies

FILE REFERENCE: 980126/HG

CURRENT APPLICATION NUMBER: US/09/053.583A

EARLIER FILING DATE: 1998-04-01

EARLIER APPLICATION NUMBER: JP HEI 9-82953

EARLIER FILING DATE: 1997-04-01

EARLIER APPLICATION NUMBER: JP HEI 9-169088

EARLIER FILING DATE: 1997-06-25



EARLIER APPLICATION NUMBER: JP HEI 9-276064

EARLIER FILING DATE: 1997-10-08

NUMBER OF SEQ ID NOS: 123

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 109

LENGTH: 238

TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed light

OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 238 Optimized Score = 238 Significance = 2.24  
Residue Identity = 99% Matches = 236 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 2

X 10 20 30 40 50 60 70  
METDTILLWVLLWVPGSTGDIVLTQSPGTLSPGERATLSCSKASQSDVDYDGSYMMNYQOKPGQAPRLLI  
METDTILLWVLLWVPGSTGDIVLTQSPGTLSPGERATLSCSKASQSDVDYDGSYMMNYQOKPGQAPRLLI  
X 10 20 30 40 50 60 70

YASNLESGIDPRFSGSGSGTDFLTITHPVEEEDAATYYCOQSNEDPRTFGQGTLEIKRTVAAPSVFIIPP  
YASNLESGIDPRFSGSGSGTDFLTITHPVEEEDAATYYCOQSNEDPRTFGQGTLEIKRTVAAPSVFIIPP  
X 80 90 100 110 120 130 140

SDEQLKSGTASVCLNNFYPREAKVQKVDNALQSGNSQESVTEQDSKDSYSLSSLTLSKADYERHKVY  
SDEQLKSGTASVCLNNFYPREAKVQKVDNALQSGNSQESVTEQDSKDSYSLSSLTLSKADYERHKVY  
X 150 160 170 180 190 200 210

220 230 X  
ACEVTHQGLSSPVTKSFNRGEC  
ACEVTHQGLSSPVTKSFNRGEC  
X 220 230

5. US-09-499-662-52 (1-238)

US-09-053-583-54 Sequence 54, Application US/09053583A

Sequence 54, Application US/09053583A

GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa

APPLICANT: Ichikawa, Kimihisa

APPLICANT: Ohsumi, Jun

APPLICANT: Ohtsuki, Masahiko

APPLICANT: Haruyama, Hideyuki

APPLICANT: Takahashi, Tohru

APPLICANT: Yoshida, Hiroko

APPLICANT: Shiraishi, Akio

APPLICANT: Yonehara, Shin

TITLE OF INVENTION: Anti-Fas Antibodies

FILE REFERENCE: 980126/HG

CURRENT APPLICATION NUMBER: US/09/053,583A

EARLIER FILING DATE: 1998-04-01

EARLIER APPLICATION NUMBER: JP HEI 9-82953

EARLIER FILING DATE: 1997-04-01

EARLIER APPLICATION NUMBER: JP HEI 9-169088

EARLIER FILING DATE: 1997-06-25

EARLIER APPLICATION NUMBER: JP HEI 9-276064

EARLIER FILING DATE: 1997-10-08

NUMBER OF SEQ ID NOS: 123

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 54

LENGTH: 238

TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed light

OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 238 Optimized Score = 238 Significance = 2.24  
Residue Identity = 99% Matches = 236 Mismatches = 1  
Gaps = 0 Conservative Substitutions = 1

X 10 20 30 40 50 60 70  
METDTILLWVLLWVPGSTGDIVLTQSPGTLSPGERATLSCSKASQSDVDYDGSYMMNYQOKPGQAPRLLI  
METDTILLWVLLWVPGSTGDIVLTQSPGTLSPGERATLSCSKASQSDVDYDGSYMMNYQOKPGQAPRLLI  
X 10 20 30 40 50 60 70

YASNLESGIDPRFSGSGSGTDFLTITHPVEEEDAATYYCOQSNEDPRTFGQGTLEIKRTVAAPSVFIIPP  
YASNLESGIDPRFSGSGSGTDFLTITHPVEEEDAATYYCOQSNEDPRTFGQGTLEIKRTVAAPSVFIIPP  
X 80 90 100 110 120 130 140

SDEQLKSGTASVCLNNFYPREAKVQKVDNALQSGNSQESVTEQDSKDSYSLSSLTLSKADYERHKVY  
SDEQLKSGTASVCLNNFYPREAKVQKVDNALQSGNSQESVTEQDSKDSYSLSSLTLSKADYERHKVY  
X 150 160 170 180 190 200 210

220 230 X  
ACEVTHQGLSSPVTKSFNRGEC  
ACEVTHQGLSSPVTKSFNRGEC  
X 220 230

6. US-09-499-662-52 (1-238)

US-09-408-646-54 Sequence 54, Application US/09408646A

Sequence 54, Application US/09408646A

GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa

APPLICANT: Haruyama, Hideyuki

APPLICANT: Nakahara, Kaori

APPLICANT: Tamaki, Ikuko

APPLICANT: Takahashi, Tohru

TITLE OF INVENTION: Anti-Fas Antibodies

FILE REFERENCE: 990540/HG

CURRENT APPLICATION NUMBER: US/09/408,646A

EARLIER FILING DATE: 1999-09-30

EARLIER APPLICATION NUMBER: JP 10-276881

EARLIER FILING DATE: 1998-09-30

NUMBER OF SEQ ID NOS: 165

SEQ ID NO 54

LENGTH: 238

TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed light

OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 238 Optimized Score = 238 Significance = 2.24  
Residue Identity = 99% Matches = 236 Mismatches = 1  
Gaps = 0 Conservative Substitutions = 1

X 10 20 30 40 50 60 70  
METDTILLWVLLWVPGSTGDIVLTQSPGTLSPGERATLSCSKASQSDVDYDGSYMMNYQOKPGQAPRLLI  
METDTILLWVLLWVPGSTGDIVLTQSPGTLSPGERATLSCSKASQSDVDYDGSYMMNYQOKPGQAPRLLI  
X 10 20 30 40 50 60 70

YASNLESGIDPRFSGSGSGTDFLTITHPVEEEDAATYYCOQSNEDPRTFGQGTLEIKRTVAAPSVFIIPP  
YASNLESGIDPRFSGSGSGTDFLTITHPVEEEDAATYYCOQSNEDPRTFGQGTLEIKRTVAAPSVFIIPP  
X 80 90 100 110 120 130 140

SDEQLKSGTASVCLNNFYPREAKVQKVDNALQSGNSQESVTEQDSKDSYSLSSLTLSKADYERHKVY  
SDEQLKSGTASVCLNNFYPREAKVQKVDNALQSGNSQESVTEQDSKDSYSLSSLTLSKADYERHKVY  
X 150 160 170 180 190 200 210

SDQLKSGTASVCLLNFPYPRKAVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYKHKVY  
|||||  
SDQLKSGTASVCLLNFPYPRKAVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYKHKVY  
150 160 170 180 190 200 210

220 X  
ACEVTHQGLSSPVTKSFNRGEC  
|||||  
ACEVTHQGLSSPVTKSFNRGEC  
220 X

7. US-09-499-662-52 (1-238)  
US-09-408-646-10 Sequence 107, Application US/09408646A

Sequence 107, Application US/09408646A

GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Nakahara, Kaori  
APPLICANT: Tamaki, Ikuko  
APPLICANT: Takahashi, Tohru  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 990540/HG  
CURRENT APPLICATION NUMBER: US/09/408,646A  
EARLIER FILING DATE: 1999-09-30  
EARLIER APPLICATION NUMBER: JP 10-276881  
EARLIER FILING DATE: 1998-09-30  
NUMBER OF SEQ ID NOS: 165  
SEQ ID NO 107

LENGTH: 238  
TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed light  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 234 Optimized Score = 234 Significance = 2.19  
Residue Identity = 96% Matches = 230 Mismatches = 6  
Gaps = 0 Conservative Substitutions = 2

X 10 20 30 40 50 60 70  
METDTLLWVLLWVPGSGDIVLTQSPGTLSPGERATLSCASQSVYDGDSDYMNYYQKPGQAPRLLI  
|||||  
METDTLLWVLLWVPGSGDIVLTQSPGTLSPGERATLSCASQSVYDGDSDYMNYYQKPGQAPRLLI  
X 10 20 30 40 50 60 70

80 90 100 110 120 130 140  
YAASNLESGIPDRFSGSGGTFTLTITHPVEEEDAATYYCQSQSNEDPRTFGGTREIKRTVAAPSVFI  
|||||  
YAASNLESGIPDRFSGSGGTFTLTITSRLEPDAFYVYCCQSQSNEDPRTFGGTREIKRTVAAPSVFI  
80 90 100 110 120 130 140

150 160 170 180 190 200 210  
SDEQLKSGTASVCLLNFPYPRKAVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYKHKVY  
|||||  
SDEQLKSGTASVCLLNFPYPRKAVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYKHKVY  
150 160 170 180 190 200 210

220 X  
ACEVTHQGLSSPVTKSFNRGEC  
|||||  
ACEVTHQGLSSPVTKSFNRGEC  
220 X

8. US-09-499-662-52 (1-238)  
US-09-408-646-50 Sequence 50, Application US/09408646A

Sequence 50, Application US/09408646A

GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa  
APPLICANT: Haruyama, Hideyuki

APPLICANT: Nakahara, Kaori  
APPLICANT: Tamaki, Ikuko  
APPLICANT: Takahashi, Tohru  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 990540/HG  
CURRENT APPLICATION NUMBER: US/09/408,646A  
EARLIER FILING DATE: 1999-09-30  
EARLIER APPLICATION NUMBER: JP 10-276881  
EARLIER FILING DATE: 1998-09-30  
NUMBER OF SEQ ID NOS: 165  
SEQ ID NO 50

LENGTH: 238  
TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed light  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 234 Optimized Score = 234 Significance = 2.19  
Residue Identity = 97% Matches = 231 Mismatches = 7  
Gaps = 0 Conservative Substitutions = 0

X 10 20 30 40 50 60 70  
METDTLLWVLLWVPGSGDIVLTQSPGTLSPGERATLSCASQSVYDGDSDYMNYYQKPGQAPRLLI  
|||||  
METDTLLWVLLWVPGSGDIVLTQSPGTLSPGERATLSCASQSVYDGDSDYMNYYQKPGQAPRLLI  
X 10 20 30 40 50 60 70

80 90 100 110 120 130 140  
YAASNLESGIPDRFSGSGGTFTLTITHPVEEEDAATYYCQSQSNEDPRTFGGTREIKRTVAAPSVFI  
|||||  
YAASNLESGIPDRFSGSGGTFTLTITSRLEPDAFYVYCCQSQSNEDPRTFGGTREIKRTVAAPSVFI  
80 90 100 110 120 130 140

150 160 170 180 190 200 210  
SDEQLKSGTASVCLLNFPYPRKAVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYKHKVY  
|||||  
SDEQLKSGTASVCLLNFPYPRKAVQWVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYKHKVY  
150 160 170 180 190 200 210

220 X  
ACEVTHQGLSSPVTKSFNRGEC  
|||||  
ACEVTHQGLSSPVTKSFNRGEC  
220 X

9. US-09-499-662-52 (1-238)  
US-09-053-583-10 Sequence 107, Application US/09053583A

Sequence 107, Application US/09053583A

GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa  
APPLICANT: Ichikawa, Kimihisa  
APPLICANT: Ohtsumi, Jun  
APPLICANT: Ohtsuki, Masahiko  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Takahashi, Tohru  
APPLICANT: Yoshida, Hiroko  
APPLICANT: Shiraishi, Akio  
APPLICANT: Yonehara, Shin  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 980126/HG  
CURRENT APPLICATION NUMBER: US/09/053,583A  
EARLIER FILING DATE: 1998-04-01  
EARLIER APPLICATION NUMBER: JP HEI 9-82953  
EARLIER FILING DATE: 1997-04-01  
EARLIER APPLICATION NUMBER: JP HEI 9-169088  
EARLIER FILING DATE: 1997-06-25  
EARLIER APPLICATION NUMBER: JP HEI 9-276064  
EARLIER FILING DATE: 1997-10-08  
NUMBER OF SEQ ID NOS: 123  
SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 107  
LENGTH: 238  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Designed light  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial score = 234 Optimized Score = 234 Significance = 2.19  
Residue Identity = 96% Matches = 230 Mismatches = 6  
Gaps = 0 Conservative Substitutions = 2

X 10 20 30 40 50 60 70  
METDTILLWLLWPGSGDGLVLTQSPGTLSPGERATLSCASQSDYDGDSDSYMNNYQOKPGQAPRLLI  
|||||  
METDTILLWLLWPGSGDGLVLTQSPGTLSPGERATLSCASQSDYDGDSDSYMNNYQOKPGQAPRLLI  
X 10 20 30 40 50 60 70

YASNLESIGIPDRFSGSGGTDFLTITIHVPEEEDAATYYCQOSNEDPRTFGQGTREIKRTVAAPSVFIAPP  
|||||  
YASNLESIGIPDRFSGSGGTDFLTITISRLPEADFAVYYCQOSNEDPRTFGQGTREIKRTVAAPSVFIAPP  
80 90 100 110 120 130 140  
YASNLESIGIPDRFSGSGGTDFLTITIHVPEEEDAATYYCQOSNEDPRTFGQGTREIKRTVAAPSVFIAPP  
150 160 170 180 190 200 210  
SDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSYSLSSITLTSKADYEHKHY  
|||||  
SDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSYSLSSITLTSKADYEHKHY  
150 160 170 180 190 200 210  
ACEVTHQGLSSPVTKSFNRGEC  
220 230 X  
ACEVTHQGLSSPVTKSFNRGEC  
220 230 X

10. US-09-499-662-52 (1-238)  
US-09-053-583-50 Sequence 50, Application US/09053583A

Sequence 50, Application US/09053583A  
GENERAL INFORMATION:  
APPLICANT: Serizawa, Nobufusa  
APPLICANT: Ichikawa, Kimihisa  
APPLICANT: Ohtsumi, Jun  
APPLICANT: Ohtsuki, Masahiko  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Takahashi, Tohru  
APPLICANT: Yoshida, Hiroko  
APPLICANT: Shiraiishi, Akio  
APPLICANT: Yonehara, Shin  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 980126/HG  
CURRENT APPLICATION NUMBER: US/09/053,583A  
CURRENT FILING DATE: 1998-04-01  
EARLIER APPLICATION NUMBER: JP HEI 9-82953  
EARLIER FILING DATE: 1997-04-01  
EARLIER APPLICATION NUMBER: JP HEI 9-169088  
EARLIER FILING DATE: 1997-06-25  
EARLIER APPLICATION NUMBER: JP HEI 9-276064  
EARLIER FILING DATE: 1997-10-08  
NUMBER OF SEQ ID NOS: 123  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 50  
LENGTH: 238  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Designed light  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial score = 234 Optimized Score = 234 Significance = 2.19  
Residue Identity = 97% Matches = 231 Mismatches = 7





APPLICANT: Tamaki, Ikuko

```
Initial Score = 237 Optimized Score = 237 Significance = 2.23
Residue Identity = 99% Matches = 236 Mismatches = 1
Gaps = 0 Conservative Substitutions = 1
```

```
X      10      20      30      40      50      60      70
METDTILLWVLLWVPGSTGDIVLTQSPGTLSPGERATLSCKASQSDVDYDGDSDYMMNYQKQPPKLLI
|||||
METDTILLWVLLWVPGSTGDIVLTQSPGTLSPGERATLSCKASQSDVDYDGDSDYMMNYQKQPPKLLI
X      10      20      30      40      50      60      70

      80      90      100     110     120     130     140
YAASNLESGIPDRFSGSGGTDFTLTITHPVEEEDAATYYCQOSNEDPRTFGQGTLEIKRTVAAPSVFIIPP
|||||
YAASNLESGIPDRFSGSGGTDFTLTITHPVEEEDAATYYCQOSNEDPRTFGQGTLEIKRTVAAPSVFIIPP
X      80      90      100     110     120     130     140

      150     160     170     180     190     200     210
SDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSYSLSSSTLTLSKADYERKHVY
|||||
SDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSYSLSSSTLTLSKADYERKHVY
X      150     160     170     180     190     200     210

      220     230      X
ACEVTHQGLSSPVTKSFNRGEC
|||||
ACEVTHQGLSSPVTKSFNRGEC
X      220     230
```

## 6. US-09-499-662-54 (1-238)

US-09-053-583-52 Sequence 52, Application US/09053583A

Sequence 52, Application US/09053583A

## GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa  
APPLICANT: Ichikawa, Kimihisa  
APPLICANT: Ohsumi, Jun  
APPLICANT: Ohtsuki, Masahiko  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Takahashi, Tohru  
APPLICANT: Yoshida, Hiroko  
APPLICANT: Shiraishi, Akio  
APPLICANT: Yonehara, Shin

TITLE OF INVENTION: Anti-Fas Antibodies

FILE REFERENCE: 980126/HG

CURRENT APPLICATION NUMBER: US/09/053,583A

CURRENT FILING DATE: 1998-04-01

EARLIER APPLICATION NUMBER: JP HEI 9-82953

EARLIER FILING DATE: 1997-04-01

EARLIER APPLICATION NUMBER: JP HEI 9-169088

EARLIER FILING DATE: 1997-06-25

EARLIER APPLICATION NUMBER: JP HEI 9-276064

EARLIER FILING DATE: 1997-10-08

NUMBER OF SEQ ID NOS: 123

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 52

LENGTH: 238

TYPE: PRT

ORGANISM: Artificial Sequence

## FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed light

OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 237 Optimized Score = 237 Significance = 2.23  
Residue Identity = 99% Matches = 236 Mismatches = 1  
Gaps = 0 Conservative Substitutions = 1

```
X      10      20      30      40      50      60      70
METDTILLWVLLWVPGSTGDIVLTQSPGTLSPGERATLSCKASQSDVDYDGDSDYMMNYQKQPPKLLI
|||||
METDTILLWVLLWVPGSTGDIVLTQSPGTLSPGERATLSCKASQSDVDYDGDSDYMMNYQKQPPKLLI
X      10      20      30      40      50      60      70
```

Initial Score = 237 Optimized Score = 237 Significance = 2.23  
Residue Identity = 98% Matches = 234 Mismatches = 3  
Gaps = 0 Conservative Substitutions = 1

```
X      10      20      30      40      50      60      70
METDTILLWVLLWVPGSTGDIVLTQSPGTLSPGERATLSCKASQSDVDYDGDSDYMMNYQKQPPKLLI
|||||
METDTILLWVLLWVPGSTGDIVLTQSPGTLSPGERATLSCKASQSDVDYDGDSDYMMNYQKQPPKLLI
X      10      20      30      40      50      60      70
```

```
YAASNLESGIPDRFSGSGGTDFTLTITHPVEEEDAATYYCQOSNEDPRTFGQGTLEIKRTVAAPSVFIIPP
|||||
```

ACEVTHQGLSSPVTKSFNRGEC  
|||||  
ACEVTHQGLSSPVTKSFNRGEC  
220 230 X

7. US-09-499-662-54 (1-238)  
US-09-408-646-10 Sequence 107, Application US/09408646A

Sequence 107, Application US/09408646A

GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa

APPLICANT: Haruyama, Hideyuki

APPLICANT: Nakahara, Kaori

APPLICANT: Tamaki, Ikuko

APPLICANT: Takahashi, Tohru

TITLE OF INVENTION: Anti-Fas Antibodies

FILE REFERENCE: 990540/HG

CURRENT APPLICATION NUMBER: US/09/408,646A

CURRENT FILING DATE: 1999-09-30

EARLIER APPLICATION NUMBER: JP 10-276881

EARLIER FILING DATE: 1998-09-30

NUMBER OF SEQ ID NOS: 165

SEQ ID NO 107

LENGTH: 238

TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed light

OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 234 Optimized Score = 234 Significance = 2.20  
Residue Identity = 95% Matches = 228 Mismatches = 7  
Gaps = 0 Conservative Substitutions = 3

X 10 20 30 40 50 60 70  
METDTILLVLLWVPGSTGDIVLTQSPGTLSPGGERATLSCASQSDYDGDSDYNNYQKPGQAPRLII  
|||||  
METDTILLVLLWVPGSTGDIVLTQSPGTLSPGGERATLSCASQSDYDGDSDYNNYQKPGQAPRLII  
X 10 20 30 40 50 60 70

80 90 100 110 120 130 140  
YAASNLESGIPDRFSGSGGTFTLTITHPVEEEDAATYYCQSNEDPRTFGGTRLEIKRTVAAPSVFIIPP  
|||||  
YAASNLESGIPDRFSGSGGTFTLTITSRLEPDAFVYCCQSNEDPRTFGGTRLEIKRTVAAPSVFIIPP  
80 90 100 110 120 130 140

150 160 170 180 190 200 210  
SDEQLKSGTASVVCLLNNFYPREAKYQWKVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYKHKVY  
|||||  
SDEQLKSGTASVVCLLNNFYPREAKYQWKVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYKHKVY  
150 160 170 180 190 200 210

220 230 X  
ACEVTHQGLSSPVTKSFNRGEC  
|||||  
ACEVTHQGLSSPVTKSFNRGEC  
220 230 X

8. US-09-499-662-54 (1-238)  
US-09-408-646-50 Sequence 50, Application US/09408646A

Sequence 50, Application US/09408646A

GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa

APPLICANT: Haruyama, Hideyuki

APPLICANT: Nakahara, Kaori

APPLICANT: Tamaki, Ikuko

APPLICANT: Takahashi, Tohru

TITLE OF INVENTION: Anti-Fas Antibodies

FILE REFERENCE: 990540/HG

CURRENT APPLICATION NUMBER: US/09/408,646A

CURRENT FILING DATE: 1999-09-30  
EARLIER APPLICATION NUMBER: JP 10-276881  
EARLIER FILING DATE: 1998-09-30  
NUMBER OF SEQ ID NOS: 165

SEQ ID NO 50

LENGTH: 238

TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed light

OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 234 Optimized Score = 234 Significance = 2.20  
Residue Identity = 96% Matches = 229 Mismatches = 8  
Gaps = 0 Conservative Substitutions = 1

X 10 20 30 40 50 60 70  
METDTILLVLLWVPGSTGDIVLTQSPGTLSPGGERATLSCASQSDYDGDSDYNNYQKPGQAPRLII  
|||||  
METDTILLVLLWVPGSTGDIVLTQSPGTLSPGGERATLSCASQSDYDGDSDYNNYQKPGQAPRLII  
X 10 20 30 40 50 60 70

80 90 100 110 120 130 140  
YAASNLESGIPDRFSGSGGTFTLTITHPVEEEDAATYYCQSNEDPRTFGGTRLEIKRTVAAPSVFIIPP  
|||||  
YAASNLESGIPDRFSGSGGTFTLTITSRLEPDAFVYCCQSNEDPRTFGGTRLEIKRTVAAPSVFIIPP  
80 90 100 110 120 130 140

150 160 170 180 190 200 210  
SDEQLKSGTASVVCLLNNFYPREAKYQWKVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYKHKVY  
|||||  
SDEQLKSGTASVVCLLNNFYPREAKYQWKVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYKHKVY  
150 160 170 180 190 200 210

220 230 X  
ACEVTHQGLSSPVTKSFNRGEC  
|||||  
ACEVTHQGLSSPVTKSFNRGEC  
220 230 X

9. US-09-499-662-54 (1-238)  
US-09-053-583-10 Sequence 107, Application US/09053583A

Sequence 107, Application US/09053583A

GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa

APPLICANT: Ichikawa, Kimihisa

APPLICANT: Ohtsuki, Jun

APPLICANT: Ohtsuki, Masahiko

APPLICANT: Haruyama, Hideyuki

APPLICANT: Takahashi, Tohru

APPLICANT: Yoshida, Hiroko

APPLICANT: Shiraishi, Akio

APPLICANT: Yonehara, Shin

TITLE OF INVENTION: Anti-Fas Antibodies

FILE REFERENCE: 980126/HG

CURRENT APPLICATION NUMBER: US/09/053,583A

CURRENT FILING DATE: 1998-04-01

EARLIER APPLICATION NUMBER: JP HEI 9-82953

EARLIER FILING DATE: 1997-04-01

EARLIER APPLICATION NUMBER: JP HEI 9-169088

EARLIER FILING DATE: 1997-06-25

EARLIER APPLICATION NUMBER: JP HEI 9-276064

EARLIER FILING DATE: 1997-10-08

NUMBER OF SEQ ID NOS: 123

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 107

LENGTH: 238

TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed light



OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 234 Optimized Score = 234 Significance = 2.20  
Residue Identity = 95% Matches = 228 Mismatches = 7  
Gaps = 0 Conservative Substitutions = 3

```
X      10      20      30      40      50      60      70
METDTILLWVLLWVPGSTGDIVLTQSPGTLSLSPGERATLSCSKASQSVVDYDGDSDYMMWYQOKPGQPKLLI
|||||
METDTILLWVLLWVPGSTGDIVLTQSPGTLSLSPGERATLSCSKASQSVVDYDGDSDYMMWYQOKPGQPKLLI
X      10      20      30      40      50      60      70
```

```
YAASNLESGIPDRFSGSGGTDFLTITIHVPEEEDAATYYCQOSNEDPRTFGQGTLEIKRTVAAPSVFIFPP
|||||
YAASNLESGIPDRFSGSGGTDFLTITISRLPEDFAVYYCQOSNEDPRTFGQGTLEIKRTVAAPSVFIFPP
X      80      90      100      110      120      130      140
```

```
SDEQLKSGTASVVCLLNNFYPREAKVQKVDNALQSGNSQESVTEQDSKDSITYSLSSITLTSKADYERHKVY
|||||
SDEQLKSGTASVVCLLNNFYPREAKVQKVDNALQSGNSQESVTEQDSKDSITYSLSSITLTSKADYERHKVY
X      150      160      170      180      190      200      210
```

```
220      230      X
ACEVTHQGLSSPVTKSFNRGEC
|||||
ACEVTHQGLSSPVTKSFNRGEC
220      230      X
```

10. US-09-499-662-54 (1-238)  
US-09-053-583-50 Sequence 50, Application US/09053583A

Sequence 50, Application US/09053583A

GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa  
APPLICANT: Ichikawa, Kimihisa  
APPLICANT: Ohsumi, Jun  
APPLICANT: Ohtsuki, Masahiko  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Takahashi, Tohru  
APPLICANT: Yoshida, Hiroko  
APPLICANT: Shiraishi, Akio  
APPLICANT: Yonehara, Shin

TITLE OF INVENTION: Anti-Fas Antibodies

FILE REFERENCE: 980126/HG

CURRENT APPLICATION NUMBER: US/09/053,583A

CURRENT FILING DATE: 1998-04-01

EARLIER APPLICATION NUMBER: JP HEI 9-82953

EARLIER FILING DATE: 1997-04-01

EARLIER APPLICATION NUMBER: JP HEI 9-169088

EARLIER FILING DATE: 1997-06-25

EARLIER APPLICATION NUMBER: JP HEI 9-276064

EARLIER FILING DATE: 1997-10-08

NUMBER OF SEQ ID NOS: 123

SOFTWARE: PatentIn ver. 2.0

SEQ ID NO 50

LENGTH: 238

TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed light

OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 234 Optimized Score = 234 Significance = 2.20  
Residue Identity = 96% Matches = 229 Mismatches = 8  
Gaps = 0 Conservative Substitutions = 1

```
X      10      20      30      40      50      60      70
METDTILLWVLLWVPGSTGDIVLTQSPGTLSLSPGERATLSCSKASQSVVDYDGDSDYMMWYQOKPGQPKLLI
|||||
METDTILLWVLLWVPGSTGDIVLTQSPGTLSLSPGERATLSCSKASQSVVDYDGDSDYMMWYQOKPGQPKLLI
X      10      20      30      40      50      60      70
```

```
X      10      20      30      40      50      60      70
YAASNLESGIPDRFSGSGGTDFLTITIHVPEEEDAATYYCQOSNEDPRTFGQGTLEIKRTVAAPSVFIFPP
|||||
YAASNLESGIPDRFSGSGGTDFLTITISRLPEDFAVYYCQOSNEDPRTFGQGTLEIKRTVAAPSVFIFPP
X      80      90      100      110      120      130      140

SDEQLKSGTASVVCLLNNFYPREAKVQKVDNALQSGNSQESVTEQDSKDSITYSLSSITLTSKADYERHKVY
|||||
SDEQLKSGTASVVCLLNNFYPREAKVQKVDNALQSGNSQESVTEQDSKDSITYSLSSITLTSKADYERHKVY
X      150      160      170      180      190      200      210

220      230      X
ACEVTHQGLSSPVTKSFNRGEC
|||||
ACEVTHQGLSSPVTKSFNRGEC
220      230      X
```



$$\begin{array}{ccc} \vee & \text{O} & \vee \\ & \text{---} & \\ \text{O} & & \text{O} \\ & \text{---} & \\ \wedge & \text{O} & \wedge \end{array}$$

# FastDB - Fast Pairwise Comparison of Sequences Release 5.4

Results file us-09-499-662-109.res made by sdavid on Mon 22 Apr 102 16:32:22-PDT.

|                                |                   |         |
|--------------------------------|-------------------|---------|
| Query sequence being compared: | US-09-499-662-109 | (1-238) |
| Number of sequences searched:  | 87                |         |
| Number of scores above cutoff: | 87                |         |

Results of the initial comparison of US-09-499-662-109 (1-238) with:  
File : vu662.pep

| Variable | Score | SD | SE | DF  | Significance |
|----------|-------|----|----|-----|--------------|
| N        | 100   | 0  | 0  | 238 |              |
| U        | 50    | 0  | 0  | 212 |              |
| M        | 50    | 0  | 0  | 185 |              |
| B        | 50    | 0  | 0  | 159 |              |
| E        | 50    | 0  | 0  | 132 |              |
| R        | 50    | 0  | 0  | 106 |              |
| R        | 50    | 0  | 0  | 79  |              |
| O        | 50    | 0  | 0  | 53  |              |
| F        | 10    | 0  | 0  | 26  |              |
| S        | 5     | 0  | 0  | 0   | **           |
| E        | 5     | 0  | 0  | 0   | **           |
| Q        | 5     | 0  | 0  | 0   |              |
| U        | 5     | 0  | 0  | 0   |              |
| E        | 5     | 0  | 0  | 0   | *            |
| N        | 5     | 0  | 0  | 0   | *            |
| C        | 5     | 0  | 0  | 0   |              |
| E        | 5     | 0  | 0  | 0   |              |
| S        | 5     | 0  | 0  | 0   |              |

The scores below are sorted by initial score.  
Significance is calculated based on initial score.

| Sequence Name | Description | Init. Opt. | Length | Score | Seq. Frame |
|---------------|-------------|------------|--------|-------|------------|
|---------------|-------------|------------|--------|-------|------------|

|                     | Sequence 109, Application | Sequence 109, Application | Sequence 109, Application |
|---------------------|---------------------------|---------------------------|---------------------------|
| 1. US-09-408-646-10 | 238                       | 238                       | 238                       |
| 2. US-09-053-583-10 | 238                       | 238                       | 238                       |

| Sequence Name       | Description              | Length | Score | Init. Opt. | Sig. | Frame |
|---------------------|--------------------------|--------|-------|------------|------|-------|
| 3. US-09-408-646-52 | Sequence 52, Application | 238    | 238   | 238        | 2.24 | 0     |
| 4. US-09-053-583-52 | Sequence 52, Application | 238    | 238   | 238        | 2.24 | 0     |

The list of other best scores is:

| Sequence Name        | Description                                | Length | Score | Init. Opt. | Sig. | Frame |
|----------------------|--|--------|-------|------------|------|-------|
| 5. US-09-408-646-54  | **** 2 standard deviations above mean **** | 238    | 237   | 237        | 2.23 | 0     |
| 6. US-09-053-583-54  | Sequence 54, Application                   | 238    | 237   | 237        | 2.23 | 0     |
| 7. US-09-408-646-10  | Sequence 54, Application                   | 238    | 235   | 235        | 2.20 | 0     |
| 8. US-09-053-583-10  | Sequence 107, Application                  | 238    | 235   | 235        | 2.20 | 0     |
| 9. US-09-408-646-50  | Sequence 50, Application                   | 238    | 234   | 234        | 2.19 | 0     |
| 10. US-09-053-583-50 | Sequence 50, Application                   | 238    | 234   | 234        | 2.19 | 0     |

1. US-09-499-662-109 (1-238)  
US-09-408-646-10 Sequence 109, Application US/09408646A

Sequence 109, Application US/09408646A

GENERAL INFORMATION:  
 APPLICANT: Serizawa, Nobuyasu  
 APPLICANT: Haruyama, Hideyuki  
 APPLICANT: Nakahara, Kaori  
 APPLICANT: Tamaki, Ikuko  
 APPLICANT: Takahashi, Tohru  
 TITLE OF INVENTION: Anti-Fas Antibodies  
 FILE REFERENCE: 930540/HG  
 CURRENT APPLICATION NUMBER: US/09/408  
 CURRENT FILING DATE: 1999-09-30  
 EARLIER APPLICATION NUMBER: JP 10-2761  
 EARLIER FILING DATE: 1998-09-30  
 NUMBER OF SEQ ID NOS: 165

```
Initial Score      = 238  Optimized Score = 238  Significance = 2.24
Residue Identity = 100%  Matches      = 238  Mismatches = 0
Gaps              = 0    Conservative Substitutions
```

X 10 20 30 40 50 60 70  
 METDITLLWLLWVPGSTGEIVLTQSPGTLSLSPGERATISCRASQSYVDGDSYNNYTQOKPGQAPRLLI  
 METDITLLWLLWVPGSTGEIVLTQSPGTLSLSPGERATISCRASQSYVDGDSYNNYTQOKPGQAPRLLI  
 METDITLLWLLWVPGSTGEIVLTQSPGTLSLSPGERATISCRASQSYVDGDSYNNYTQOKPGQAPRLLI  
 X 10 20 30 40 50 60 70

YAA<sup>80</sup>NS<sup>81</sup>LE<sup>82</sup>SG<sup>83</sup>IP<sup>84</sup>DR<sup>85</sup>FG<sup>86</sup>SG<sup>87</sup>SG<sup>88</sup>T<sup>89</sup>FT<sup>90</sup>LI<sup>91</sup>HP<sup>92</sup>VEE<sup>93</sup>DA<sup>94</sup>AT<sup>95</sup>YC<sup>96</sup>Q<sup>97</sup>S<sup>98</sup>NE<sup>99</sup>DR<sup>100</sup>PT<sup>101</sup>FG<sup>102</sup>Q<sup>103</sup>TK<sup>104</sup>LE<sup>105</sup>IR<sup>106</sup>TV<sup>107</sup>AA<sup>108</sup>PS<sup>109</sup>VF<sup>110</sup>IF<sup>111</sup>PP<sup>112</sup>

YAA<sup>80</sup>NS<sup>81</sup>LE<sup>82</sup>SG<sup>83</sup>IP<sup>84</sup>DR<sup>85</sup>FG<sup>86</sup>SG<sup>87</sup>SG<sup>88</sup>T<sup>89</sup>FT<sup>90</sup>LI<sup>91</sup>HP<sup>92</sup>VEE<sup>93</sup>DA<sup>94</sup>AT<sup>95</sup>YC<sup>96</sup>Q<sup>97</sup>S<sup>98</sup>NE<sup>99</sup>DR<sup>100</sup>PT<sup>101</sup>FG<sup>102</sup>Q<sup>103</sup>TK<sup>104</sup>LE<sup>105</sup>IR<sup>106</sup>TV<sup>107</sup>AA<sup>108</sup>PS<sup>109</sup>VF<sup>110</sup>IF<sup>111</sup>PP<sup>112</sup>

YAA<sup>80</sup>NS<sup>81</sup>LE<sup>82</sup>SG<sup>83</sup>IP<sup>84</sup>DR<sup>85</sup>FG<sup>86</sup>SG<sup>87</sup>SG<sup>88</sup>T<sup>89</sup>FT<sup>90</sup>LI<sup>91</sup>HP<sup>92</sup>VEE<sup>93</sup>DA<sup>94</sup>AT<sup>95</sup>YC<sup>96</sup>Q<sup>97</sup>S<sup>98</sup>NE<sup>99</sup>DR<sup>100</sup>PT<sup>101</sup>FG<sup>102</sup>Q<sup>103</sup>TK<sup>104</sup>LE<sup>105</sup>IR<sup>106</sup>TV<sup>107</sup>AA<sup>108</sup>PS<sup>109</sup>VF<sup>110</sup>IF<sup>111</sup>PP<sup>112</sup>

SDQLSGTASVYCLLNPFYPREAKVOMKVDNALGSGQSQSVTEQDSKSTYLSLSTLTLSKADYEKKHVY  
 |||||  
 SDQLSGTASVYCLLNPFYPREAKVOMKVDNALGSGQSQSVTEQDSKSTYLSLSTLTLSKADYEKKHVY  
 |||||  
 SDQLSGTASVYCLLNPFYPREAKVOMKVDNALGSGQSQSVTEQDSKSTYLSLSTLTLSKADYEKKHVY  
 |||||

220                   X  
ACEVTHQGLSSPVTKSFNRGEC  
|||||  
ACEVTHQGLSSPVTKSFNRGEC  
220                   X

2. US-09-499-662-109 (1-238)  
US-09-053-583-10 Sequence 109, Application US/09053583A

Sequence 109, Application US/09053583A

GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa  
APPLICANT: Ichikawa, Kimihisa  
APPLICANT: Ohsumi, Jun  
APPLICANT: Ohtsuki, Masahiko  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Takahashi, Tohru  
APPLICANT: Yoshida, Hiroko  
APPLICANT: Shiraishi, Akio  
APPLICANT: Yonehara, Shin  
TITLE OF INVENTION: Anti-Fas Antibodies

FILE REFERENCE: 980126/HG

CURRENT APPLICATION NUMBER: US/09/053,583A

CURRENT FILING DATE: 1998-04-01

EARLIER APPLICATION NUMBER: JP HEI 9-82953

EARLIER FILING DATE: 1997-04-01

EARLIER APPLICATION NUMBER: JP HEI 9-169088

EARLIER FILING DATE: 1997-06-25

EARLIER APPLICATION NUMBER: JP HEI 9-276064

EARLIER FILING DATE: 1997-10-08

NUMBER OF SEQ ID NOS: 123

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 109

LENGTH: 238

TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed light  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 238 Optimized Score = 2.24  
Residue Identity = 100% Matches = 0  
Gaps = 0 Conservative Substitutions = 0

X   10   20   30   40   50   60   70  
METDTILLWVLLWVPGSTGEIVLTQSPGTLSPGERATLSCSKASQSYVDYDGDSDSYMNYOQKPGQAPRLLI  
|||||  
METDTILLWVLLWVPGSTGEIVLTQSPGTLSPGERATLSCSKASQSYVDYDGDSDSYMNYOQKPGQAPRLLI  
X   10   20   30   40   50   60   70

80   90   100   110   120   130   140  
YAASNLESGIPDRFSGSGGTFTLTTHHPVEEEDAATYYCQSNEDPRTFGGQTKLEIKRTVAAPSVFIAPP  
|||||  
YAASNLESGIPDRFSGSGGTFTLTTHHPVEEEDAATYYCQSNEDPRTFGGQTKLEIKRTVAAPSVFIAPP  
80   90   100   110   120   130   140

150   160   170   180   190   200   210  
SDEQLKSGTASVYVCLLNFPYPRKAVQWVDNALQSGNSQESVTEQDSKDSYLSSTLTLSKADYERHKVY  
|||||  
SDEQLKSGTASVYVCLLNFPYPRKAVQWVDNALQSGNSQESVTEQDSKDSYLSSTLTLSKADYERHKVY  
150   160   170   180   190   200   210

220                   X  
ACEVTHQGLSSPVTKSFNRGEC  
|||||  
ACEVTHQGLSSPVTKSFNRGEC  
220                   X

3. US-09-499-662-109 (1-238)  
US-09-408-646-52 Sequence 52, Application US/09408646A

Sequence 52, Application US/09408646A

GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Nakahara, Kaori  
APPLICANT: Tamaki, Ikuko

APPLICANT: Takahashi, Tohru

TITLE OF INVENTION: Anti-Fas Antibodies

FILE REFERENCE: 990540/HG

CURRENT APPLICATION NUMBER: US/09/408,646A

CURRENT FILING DATE: 1999-09-30

EARLIER APPLICATION NUMBER: JP 10-276881

EARLIER FILING DATE: 1998-09-30

NUMBER OF SEQ ID NOS: 165

SEQ ID NO 52

LENGTH: 238

TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed light  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 238 Optimized Score = 2.24  
Residue Identity = 99% Matches = 236 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 2

X   10   20   30   40   50   60   70  
METDTILLWVLLWVPGSTGEIVLTQSPGTLSPGERATLSCSKASQSYVDYDGDSDSYMNYOQKPGQAPRLLI  
|||||  
METDTILLWVLLWVPGSTGEIVLTQSPGTLSPGERATLSCSKASQSYVDYDGDSDSYMNYOQKPGQAPRLLI  
X   10   20   30   40   50   60   70

80   90   100   110   120   130   140  
YAASNLESGIPDRFSGSGGTFTLTTHHPVEEEDAATYYCQSNEDPRTFGGQTKLEIKRTVAAPSVFIAPP  
|||||  
YAASNLESGIPDRFSGSGGTFTLTTHHPVEEEDAATYYCQSNEDPRTFGGQTKLEIKRTVAAPSVFIAPP  
80   90   100   110   120   130   140

150   160   170   180   190   200   210  
SDEQLKSGTASVYVCLLNFPYPRKAVQWVDNALQSGNSQESVTEQDSKDSYLSSTLTLSKADYERHKVY  
|||||  
SDEQLKSGTASVYVCLLNFPYPRKAVQWVDNALQSGNSQESVTEQDSKDSYLSSTLTLSKADYERHKVY  
150   160   170   180   190   200   210

220                   X  
ACEVTHQGLSSPVTKSFNRGEC  
|||||  
ACEVTHQGLSSPVTKSFNRGEC  
220                   X

4. US-09-499-662-109 (1-238)  
US-09-053-583-52 Sequence 52, Application US/09053583A

Sequence 52, Application US/09053583A

GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa  
APPLICANT: Ichikawa, Kimihisa  
APPLICANT: Ohsumi, Jun  
APPLICANT: Ohtsuki, Masahiko  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Takahashi, Tohru  
APPLICANT: Yoshida, Hiroko  
APPLICANT: Shiraishi, Akio  
APPLICANT: Yonehara, Shin

TITLE OF INVENTION: Anti-Fas Antibodies

FILE REFERENCE: 980126/HG

CURRENT APPLICATION NUMBER: US/09/053,583A

CURRENT FILING DATE: 1998-04-01

EARLIER APPLICATION NUMBER: JP HEI 9-82953

EARLIER FILING DATE: 1997-04-01

EARLIER APPLICATION NUMBER: JP HEI 9-169088

EARLIER FILING DATE: 1997-06-25

EARLIER APPLICATION NUMBER: JP HEI 9-276064  
EARLIER FILING DATE: 1997-10-08  
NUMBER OF SEQ ID NOS: 123  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 52  
LENGTH: 238  
TYPE: PRT  
ORGANISM: Artificial Sequence

FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Designed light  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 238 Optimized Score = 238 Significance = 2.24  
Residue Identity = 98% Matches = 236 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 2

```

X      10      20      30      40      50      60      70
METDTILLWVLLWVPGSGTGTTLTIHPVEEEDAATYCCQSNEDPRTFGOGTKLEIKRTVAAPSVFIPPP
|||||
YAAASLESIGIPDRFSGSGSGTGTTLTIHPVEEEDAATYCCQSNEDPRTFGOGTKLEIKRTVAAPSVFIPPP
|||||
YAAASLESIGIPDRFSGSGSGTGTTLTIHPVEEEDAATYCCQSNEDPRTFGOGTKLEIKRTVAAPSVFIPPP
|||||
METDTILLWVLLWVPGSGTGTTLTIHPVEEEDAATYCCQSNEDPRTFGOGTKLEIKRTVAAPSVFIPPP
|||||
X      10      20      30      40      50      60      70
```

```

80      90      100      110      120      130      140
YAAASLESIGIPDRFSGSGSGTGTTLTIHPVEEEDAATYCCQSNEDPRTFGOGTKLEIKRTVAAPSVFIPPP
|||||
YAAASLESIGIPDRFSGSGSGTGTTLTIHPVEEEDAATYCCQSNEDPRTFGOGTKLEIKRTVAAPSVFIPPP
|||||
YAAASLESIGIPDRFSGSGSGTGTTLTIHPVEEEDAATYCCQSNEDPRTFGOGTKLEIKRTVAAPSVFIPPP
|||||
X      80      90      100      110      120      130      140
```

```

150      160      170      180      190      200      210
SDEQLKSGTASVVCLLNNFYPREAKVQKVDNALQSGNSQESVTEQDSKDSYSLSSITLTSKADYEHKVV
|||||
SDEQLKSGTASVVCLLNNFYPREAKVQKVDNALQSGNSQESVTEQDSKDSYSLSSITLTSKADYEHKVV
|||||
SDEQLKSGTASVVCLLNNFYPREAKVQKVDNALQSGNSQESVTEQDSKDSYSLSSITLTSKADYEHKVV
|||||
X      150      160      170      180      190      200      210
```

```

220      230      X
ACEVTHQGLSSPVTKSFNRGEC
|||||
ACEVTHQGLSSPVTKSFNRGEC
220      230      X
```

5. US-09-499-662-109 (1-238)  
US-09-408-646-54 Sequence 54, Application US/09408646A

Sequence 54, Application US/09408646A

GENERAL INFORMATION:  
APPLICANT: Serizawa, Nobufusa  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Nakahara, Kaori  
APPLICANT: Tamaki, Ikuo  
APPLICANT: Takahashi, Tohru  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 990540/HG  
CURRENT APPLICATION NUMBER: US/09/408,646A  
EARLIER FILING DATE: 1999-09-30  
EARLIER APPLICATION NUMBER: JP 10-276881  
EARLIER FILING DATE: 1998-09-30  
NUMBER OF SEQ ID NOS: 165  
SEQ ID NO 54  
LENGTH: 238  
TYPE: PRT  
ORGANISM: Artificial Sequence

FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Designed light  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 237 Optimized Score = 237 Significance = 2.23  
Residue Identity = 98% Matches = 234 Mismatches = 1  
Gaps = 0 Conservative Substitutions = 3

```

X      10      20      30      40      50      60      70
METDTILLWVLLWVPGSGTGTTLTIHPVEEEDAATYCCQSNEDPRTFGOGTKLEIKRTVAAPSVFIPPP
|||||
YAAASLESIGIPDRFSGSGSGTGTTLTIHPVEEEDAATYCCQSNEDPRTFGOGTKLEIKRTVAAPSVFIPPP
|||||
YAAASLESIGIPDRFSGSGSGTGTTLTIHPVEEEDAATYCCQSNEDPRTFGOGTKLEIKRTVAAPSVFIPPP
|||||
METDTILLWVLLWVPGSGTGTTLTIHPVEEEDAATYCCQSNEDPRTFGOGTKLEIKRTVAAPSVFIPPP
|||||
X      10      20      30      40      50      60      70
```

```

X      10      20      30      40      50      60      70
METDTILLWVLLWVPGSGTGTTLTIHPVEEEDAATYCCQSNEDPRTFGOGTKLEIKRTVAAPSVFIPPP
|||||
YAAASLESIGIPDRFSGSGSGTGTTLTIHPVEEEDAATYCCQSNEDPRTFGOGTKLEIKRTVAAPSVFIPPP
|||||
YAAASLESIGIPDRFSGSGSGTGTTLTIHPVEEEDAATYCCQSNEDPRTFGOGTKLEIKRTVAAPSVFIPPP
|||||
METDTILLWVLLWVPGSGTGTTLTIHPVEEEDAATYCCQSNEDPRTFGOGTKLEIKRTVAAPSVFIPPP
|||||
X      80      90      100      110      120      130      140
```

```

150      160      170      180      190      200      210
SDEQLKSGTASVVCLLNNFYPREAKVQKVDNALQSGNSQESVTEQDSKDSYSLSSITLTSKADYEHKVV
|||||
SDEQLKSGTASVVCLLNNFYPREAKVQKVDNALQSGNSQESVTEQDSKDSYSLSSITLTSKADYEHKVV
|||||
SDEQLKSGTASVVCLLNNFYPREAKVQKVDNALQSGNSQESVTEQDSKDSYSLSSITLTSKADYEHKVV
|||||
X      150      160      170      180      190      200      210
```

```

220      230      X
ACEVTHQGLSSPVTKSFNRGEC
|||||
ACEVTHQGLSSPVTKSFNRGEC
220      230      X
```

6. US-09-499-662-109 (1-238)  
US-09-053-583-54 Sequence 54, Application US/09053583A

Sequence 54, Application US/09053583A

GENERAL INFORMATION:  
APPLICANT: Serizawa, Nobufusa  
APPLICANT: Ichikawa, Kimihisa  
APPLICANT: Ohsami, Jun  
APPLICANT: Ohtsuki, Masahiko  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Takahashi, Tohru  
APPLICANT: Yoshida, Hiroko  
APPLICANT: Shiraiishi, Akio  
APPLICANT: Yonehara, Shin  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 980126/HG  
CURRENT APPLICATION NUMBER: US/09/053,583A  
EARLIER FILING DATE: 1998-04-01  
EARLIER APPLICATION NUMBER: JP HEI 9-82953  
EARLIER FILING DATE: 1997-04-01  
EARLIER APPLICATION NUMBER: JP HEI 9-169088  
EARLIER FILING DATE: 1997-06-25  
EARLIER APPLICATION NUMBER: JP HEI 9-276064  
EARLIER FILING DATE: 1997-10-08  
NUMBER OF SEQ ID NOS: 123  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 54  
LENGTH: 238  
TYPE: PRT  
ORGANISM: Artificial Sequence

FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Designed light  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 237 Optimized Score = 237 Significance = 2.23  
Residue Identity = 98% Matches = 234 Mismatches = 1  
Gaps = 0 Conservative Substitutions = 3

```

X      10      20      30      40      50      60      70
METDTILLWVLLWVPGSGTGTTLTIHPVEEEDAATYCCQSNEDPRTFGOGTKLEIKRTVAAPSVFIPPP
|||||
YAAASLESIGIPDRFSGSGSGTGTTLTIHPVEEEDAATYCCQSNEDPRTFGOGTKLEIKRTVAAPSVFIPPP
|||||
YAAASLESIGIPDRFSGSGSGTGTTLTIHPVEEEDAATYCCQSNEDPRTFGOGTKLEIKRTVAAPSVFIPPP
|||||
METDTILLWVLLWVPGSGTGTTLTIHPVEEEDAATYCCQSNEDPRTFGOGTKLEIKRTVAAPSVFIPPP
|||||
X      10      20      30      40      50      60      70
```

```

80      90      100      110      120      130      140
YAAASLESIGIPDRFSGSGSGTGTTLTIHPVEEEDAATYCCQSNEDPRTFGOGTKLEIKRTVAAPSVFIPPP
|||||
YAAASLESIGIPDRFSGSGSGTGTTLTIHPVEEEDAATYCCQSNEDPRTFGOGTKLEIKRTVAAPSVFIPPP
|||||
YAAASLESIGIPDRFSGSGSGTGTTLTIHPVEEEDAATYCCQSNEDPRTFGOGTKLEIKRTVAAPSVFIPPP
|||||
METDTILLWVLLWVPGSGTGTTLTIHPVEEEDAATYCCQSNEDPRTFGOGTKLEIKRTVAAPSVFIPPP
|||||
X      80      90      100      110      120      130      140
```

```

150      160      170      180      190      200      210
```

SDQLKSGTASVVCLLNNEYPREAKVQWKVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYEKHKVY  
|||||  
SDQLKSGTASVVCLLNNEYPREAKVQWKVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYEKHKVY  
150 160 170 180 190 200 210

220 X  
ACEVTHQGLSSPVTKSFNRGEC  
|||||  
ACEVTHQGLSSPVTKSFNRGEC  
220 X

7. US-09-499-662-109 (1-238)  
US-09-408-646-10 Sequence 107, Application US/09408646A

Sequence 107, Application US/09408646A

GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa

APPLICANT: Haruyama, Hideyuki

APPLICANT: Nakahara, Kaori

APPLICANT: Tamaki, Ikuko

APPLICANT: Takahashi, Tohru

TITLE OF INVENTION: Anti-Fas Antibodies

FILE REFERENCE: 990540/HG

CURRENT APPLICATION NUMBER: US/09/408,646A

CURRENT FILING DATE: 1999-09-30

EARLIER APPLICATION NUMBER: JP 10-276881

EARLIER FILING DATE: 1998-09-30

NUMBER OF SEQ ID NOS: 165

SEQ ID NO 107

LENGTH: 238

TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed light

OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 235 Optimized Score = 2.20  
Residue Identity = 97% Matches = 232 Mismatches = 6  
Gaps = 0 Conservative Substitutions = 0

X 10 20 30 40 50 60 70  
METDTILLWLLWPGSGEIVLTQSPGTLSPGERATLSCAKSQSYVDYDGDSTYMNWYQKPGQAPRLLI  
|||||  
METDTILLWLLWPGSGEIVLTQSPGTLSPGERATLSCAKSQSYVDYDGDSTYMNWYQKPGQAPRLLI  
10 20 30 40 50 60 70

80 90 100 110 120 130 140  
YAASNLESGIPDRFSGSGGTFTLTITHPVEEEDAATYYCQSQSNEDPRTFGGQTKLEIKRTVAAPSVFIAPP  
|||||  
YAASNLESGIPDRFSGSGGTFTLTITSRLEPEDFAVYYCQSQSNEDPRTFGGQTKLEIKRTVAAPSVFIAPP  
80 90 100 110 120 130 140

150 160 170 180 190 200 210  
SDQLKSGTASVVCLLNNEYPREAKVQWKVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYEKHKVY  
|||||  
SDQLKSGTASVVCLLNNEYPREAKVQWKVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYEKHKVY  
150 160 170 180 190 200 210

220 X  
ACEVTHQGLSSPVTKSFNRGEC  
|||||  
ACEVTHQGLSSPVTKSFNRGEC  
220 X

8. US-09-499-662-109 (1-238)  
US-09-053-583-10 Sequence 107, Application US/09053583A

Sequence 107, Application US/09053583A

GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa

APPLICANT: Ichikawa, Kimihisa

APPLICANT: Ohsumi, Jun  
APPLICANT: Ohtsuki, Masahiko  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Takahashi, Tohru  
APPLICANT: Yoshida, Hiroko  
APPLICANT: Shiraiishi, Akio  
APPLICANT: Yonehara, Shin  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 980126/HG  
CURRENT APPLICATION NUMBER: US/09/053,583A  
CURRENT FILING DATE: 1998-04-01  
EARLIER APPLICATION NUMBER: JP HEI 9-82953  
EARLIER FILING DATE: 1997-04-01  
EARLIER APPLICATION NUMBER: JP HEI 9-169088  
EARLIER FILING DATE: 1997-06-25  
EARLIER APPLICATION NUMBER: JP HEI 9-276064  
EARLIER FILING DATE: 1997-10-08  
NUMBER OF SEQ ID NOS: 123  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 107  
LENGTH: 238  
TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed light

OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 235 Optimized Score = 2.20  
Residue Identity = 97% Matches = 232 Mismatches = 6  
Gaps = 0 Conservative Substitutions = 0

X 10 20 30 40 50 60 70  
METDTILLWLLWPGSGEIVLTQSPGTLSPGERATLSCAKSQSYVDYDGDSTYMNWYQKPGQAPRLLI  
|||||  
METDTILLWLLWPGSGEIVLTQSPGTLSPGERATLSCAKSQSYVDYDGDSTYMNWYQKPGQAPRLLI  
10 20 30 40 50 60 70

80 90 100 110 120 130 140  
YAASNLESGIPDRFSGSGGTFTLTITHPVEEEDAATYYCQSQSNEDPRTFGGQTKLEIKRTVAAPSVFIAPP  
|||||  
YAASNLESGIPDRFSGSGGTFTLTITSRLEPEDFAVYYCQSQSNEDPRTFGGQTKLEIKRTVAAPSVFIAPP  
80 90 100 110 120 130 140

150 160 170 180 190 200 210  
SDQLKSGTASVVCLLNNEYPREAKVQWKVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYEKHKVY  
|||||  
SDQLKSGTASVVCLLNNEYPREAKVQWKVDNALQSGNSQESVTEQDSKDSYSLSTLTLSKADYEKHKVY  
150 160 170 180 190 200 210

220 X  
ACEVTHQGLSSPVTKSFNRGEC  
|||||  
ACEVTHQGLSSPVTKSFNRGEC  
220 X

9. US-09-499-662-109 (1-238)  
US-09-408-646-50 Sequence 50, Application US/09408646A

Sequence 50, Application US/09408646A

GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa

APPLICANT: Haruyama, Hideyuki

APPLICANT: Nakahara, Kaori

APPLICANT: Tamaki, Ikuko

APPLICANT: Takahashi, Tohru

TITLE OF INVENTION: Anti-Fas Antibodies

FILE REFERENCE: 990540/HG

CURRENT APPLICATION NUMBER: US/09/408,646A

CURRENT FILING DATE: 1999-09-30

EARLIER APPLICATION NUMBER: JP 10-276881

EARLIER FILING DATE: 1998-09-30

NUMBER OF SEQ ID NOS: 165

SEQ ID NO 50  
LENGTH: 238  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Designed light  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 234 Optimized Score = 234 Significance = 2.19  
Residue Identity = 96% Matches = 229 Mismatches = 7  
Gaps = 0 Conservative Substitutions = 2

X 10 20 30 40 50 60 70  
METDTILLWLLWPGSTGEIVLTQSPGTLSPGERATLSCKASQSYDYGDSYMNWYQKPGQAPRLLI  
|||||  
METDTILLWLLWPGSTGEIVLTQSPGTLSPGERATLSCKASQSYDYGDSYMNWYQKPGQAPRLLI  
X 10 20 30 40 50 60 70

YASNLESGIPDRFSGSGGTFTLTTHPVEEEDAATYYCQOSNEDPRTFGGQTKLEIKRTVAAPSVFIAPP  
|||||  
YASNLESGIPDRFSGSGGTFTLTTHPVEEEDAATYYCQOSNEDPRTFGGQTKLEIKRTVAAPSVFIAPP  
80 90 100 110 120 130 140

SDEQLKSGTASVVCLLNNFYPREAKVQKVDNALQSGNSQESVTEQDSKDSYSLSSITLTSKADYERHKVY  
|||||  
SDEQLKSGTASVVCLLNNFYPREAKVQKVDNALQSGNSQESVTEQDSKDSYSLSSITLTSKADYERHKVY  
150 160 170 180 190 200 210

ACEVTHQGLSSPVTKSFNRGEC  
220 230 X  
ACEVTHQGLSSPVTKSFNRGEC  
220 230 X

10. US-09-499-662-109 (1-238)  
US-09-053-583-50 Sequence 50, Application US/09053583A

Sequence 50, Application US/09053583A  
GENERAL INFORMATION:  
APPLICANT: Serizawa, Nobufusa  
APPLICANT: Ichikawa, Kimihisa  
APPLICANT: Ohtsumi, Jun  
APPLICANT: Ohtsuki, Masahiko  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Takahashi, Tohru  
APPLICANT: Yoshida, Hiroko  
APPLICANT: Shiraishi, Akio  
APPLICANT: Yonehara, Shin  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 980126/HG  
CURRENT APPLICATION NUMBER: US/09/053,583A  
EARLIER FILING DATE: 1998-04-01  
EARLIER FILING DATE: JP HEI 9-82953  
EARLIER FILING DATE: 1997-04-01  
EARLIER APPLICATION NUMBER: JP HEI 9-169088  
EARLIER FILING DATE: 1997-06-25  
EARLIER APPLICATION NUMBER: JP HEI 9-276064  
EARLIER FILING DATE: 1997-10-08  
NUMBER OF SEQ ID NOS: 123  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID N) 50  
LENGTH: 238  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Designed light  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 234 Optimized Score = 234 Significance = 2.19  
Residue Identity = 96% Matches = 229 Mismatches = 7





227 230 240

| Sequence Name | Description | Length Score |
|---------------|-------------|--------------|
|---------------|-------------|--------------|

290 300 310 320 330 340 350 360  
VSHEDPEVFNWYVGVVHNATKPREQYNTYRVSVLTVLHODWLNKKEYCKVSNKALPAPTEKTIS  
|||||  
VSHEDPEVFNWYVGVVHNATKPREQYNTYRVSVLTVLHODWLNKKEYCKVSNKALPAPTEKTIS  
290 300 310 320 330 340 350 360  
KAKQPREPOVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTPPVLDSDGSFFLYSK  
|||||  
KAKQPREPOVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTPPVLDSDGSFFLYSK  
370 380 390 400 410 420 430  
KAKQPREPOVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTPPVLDSDGSFFLYSK  
|||||  
KAKQPREPOVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTPPVLDSDGSFFLYSK  
370 380 390 400 410 420 430  
KAKQPREPOVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTPPVLDSDGSFFLYSK  
440 450 460 X  
LTVDKSRWQOGNVFSCVMHEALHNHYTOKSLSPGK  
|||||  
LTVDKSRWQOGNVFSCVMHEALHNHYTOKSLSPGK  
440 450 460 470

2. US-09-499-662-89 (1-470)  
US-09-053-583-89 Sequence 89, Application US/09053583A

## Sequence 89, Application US/09053583A

## GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa  
APPLICANT: Ichikawa, Kimihisa  
APPLICANT: Ohsumi, Jun  
APPLICANT: Ohtsuki, Masahiko  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Takahashi, Tohru  
APPLICANT: Yoshida, Hiroko  
APPLICANT: Shiraiishi, Akio  
APPLICANT: Yonehara, Shin

TITLE OF INVENTION: Anti-Fas Antibodies

FILE REFERENCE: 980126/HG  
CURRENT APPLICATION NUMBER: US/09/053,583A  
CURRENT FILING DATE: 1998-04-01  
EARLIER APPLICATION NUMBER: JP HEI 9-82953  
EARLIER FILING DATE: 1997-04-01  
EARLIER APPLICATION NUMBER: JP HEI 9-169088  
EARLIER FILING DATE: 1997-06-25  
EARLIER APPLICATION NUMBER: JP HEI 9-276064  
EARLIER FILING DATE: 1997-10-08  
NUMBER OF SEQ ID NOS: 123  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 89

LENGTH: 470

TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed heavy

OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 470 Optimized Score = 470 Significance = 3.01  
Residue Identity = 100% Matches = 470 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X 10 20 30 40 50 60 70  
MGWSCILFLVATATGVHSQVQLVQSGAEVKKPGASVKVSCKRAGTFTSYNMQWVKQAPGORLEWGEIDP  
|||||  
MGWSCILFLVATATGVHSQVQLVQSGAEVKKPGASVKVSCKRAGTFTSYNMQWVKQAPGORLEWGEIDP  
X 10 20 30 40 50 60 70

80 90 100 110 120 130 140  
SDSYTYNOKFKGKATLTVDTSASTAYMELSSRLSEDATVYICARNRDYSNNWYFDVWGEGLTVTVSSASTK  
|||||  
SDSYTYNOKFKGKATLTVDTSASTAYMELSSRLSEDATVYICARNRDYSNNWYFDVWGEGLTVTVSSASTK  
80 90 100 110 120 130 140

150 160 170 180 190 200 210  
GPSVFPPLAPSSKSTSGTAAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVTVPPSSSL  
|||||

GPSVFPPLAPSSKSTSGTAAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVTVPPSSSL  
150 160 170 180 190 200 210  
220 230 240 250 260 270 280  
GTQTYICNVNHRKPSNTKVKRVPKSCDKTHTCPPCPAPPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVD  
|||||  
GTQTYICNVNHRKPSNTKVKRVPKSCDKTHTCPPCPAPPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVD  
220 230 240 250 260 270 280  
VSHEDPEVFNWYVGVVHNATKPREQYNTYRVSVLTVLHODWLNKKEYCKVSNKALPAPTEKTIS  
|||||  
VSHEDPEVFNWYVGVVHNATKPREQYNTYRVSVLTVLHODWLNKKEYCKVSNKALPAPTEKTIS  
290 300 310 320 330 340 350 360  
KAKQPREPOVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTPPVLDSDGSFFLYSK  
|||||  
KAKQPREPOVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTPPVLDSDGSFFLYSK  
370 380 390 400 410 420 430  
LTVDKSRWQOGNVFSCVMHEALHNHYTOKSLSPGK X  
|||||  
LTVDKSRWQOGNVFSCVMHEALHNHYTOKSLSPGK  
440 450 460 470

3. US-09-499-662-89 (1-470)  
US-09-408-646-14 Sequence 143, Application US/09408646A

## Sequence 143, Application US/09408646A

## GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Nakahara, Kaori  
APPLICANT: Tamaki, Ikuko  
APPLICANT: Takahashi, Tohru

TITLE OF INVENTION: Anti-Fas Antibodies

FILE REFERENCE: 990540/HG  
CURRENT APPLICATION NUMBER: US/09/408,646A  
CURRENT FILING DATE: 1999-09-30  
EARLIER APPLICATION NUMBER: JP 10-276881  
EARLIER FILING DATE: 1998-09-30  
NUMBER OF SEQ ID NOS: 165  
SEQ ID NO 143

LENGTH: 470

TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed heavy

OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 469 Optimized Score = 469 Significance = 3.00  
Residue Identity = 99% Matches = 467 Mismatches = 3  
Gaps = 0 Conservative Substitutions = 0

X 10 20 30 40 50 60 70  
MGWSCILFLVATATGVHSQVQLVQSGAEVKKPGASVKVSCKRAGTFTSYNMQWVKQAPGORLEWGEIDP  
|||||  
MGWSCILFLVATATGVHSQVQLVQSGAEVKKPGASVKVSCKRAGTFTSYNMQWVKQAPGORLEWGEIDP  
X 10 20 30 40 50 60 70

80 90 100 110 120 130 140  
SDSYTYNOKFKGKATLTVDTSASTAYMELSSRLSEDATVYICARNRDYSNNWYFDVWGEGLTVTVSSASTK  
|||||  
SDSYTYNOKFKGKATLTVDTSASTAYMELSSRLSEDATVYICARNRDYSNNWYFDVWGEGLTVTVSSASTK  
80 90 100 110 120 130 140

150 160 170 180 190 200 210  
GPSVFPPLAPSSKSTSGTAAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVTVPPSSSL  
|||||

150 160 170 180 190 200 210  
220 230 240 250 260 270 280  
GTQYICNVNHPKSNTKVDKREPKSCDKTHTCCPCPAPPELLGGPSVFLFPKPKDITLMISRTPEVTCVVVD  
|||||  
GTQYICNVNHPKSNTKVDKREPKSCDKTHTCCPCPAPPELLGGPSVFLFPKPKDITLMISRTPEVTCVVVD  
220 230 240 250 260 270 280  
VSHDEPEVKFNMYVDGVEVHNKAKTPREQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTIS  
|||||  
VSHDEPEVKFNMYVDGVEVHNKAKTPREQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTIS  
290 300 310 320 330 340 350 360  
KAKGPREPQVYTLPPSREMTKNOVSLTCLVKGYFSPDIAVEWESNGOPENNYKTPPVLDSDGSFFLYSK  
|||||  
KAKGPREPQVYTLPPSREMTKNOVSLTCLVKGYFSPDIAVEWESNGOPENNYKTPPVLDSDGSFFLYSK  
370 380 390 400 410 420 430  
440 450 460 X  
LTVDKSRWQOQGNVFCSCVMHEALHNNHYTKQSLSPGK  
|||||  
LTVDKSRWQOQGNVFCSCVMHEALHNNHYTKQSLSPGK  
440 450 460 470

4. US-09-499-662-89 (1-470)  
US-09-408-646-11 Sequence 117, Application US/09408646A

Sequence 117, Application US/09408646A  
GENERAL INFORMATION:  
APPLICANT: Serizawa, Nobufusa  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Nakahara, Kaori  
APPLICANT: Tamaki, Ikuko  
APPLICANT: Takahashi, Tohru  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 990540/HG  
CURRENT APPLICATION NUMBER: US/09/408,646A  
EARLIER FILING DATE: 1999-09-30  
EARLIER FILING DATE: 1998-09-30  
NUMBER OF SEQ ID NOS: 165  
SEQ ID NO 117  
LENGTH: 470  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Designed heavy  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 469 Optimized Score = 469 Significance = 3.00  
Residue Identity = 99% Matches = 468 Mismatches = 2  
Gaps = 0 Conservative Substitutions = 0

X 10 20 30 40 50 60 70  
MCWSCIILFLVATATGVHSQVQLVQSGAEVKKPGASVKVSCKASGYTFTSYMQWVKQAPGORLEWNGEIDP  
|||||  
MCWSCIILFLVATATGVHSQVQLVQSGAEVKKPGASVKVSCKASGYTFTSYMQWVKQAPGORLEWNGEIDP  
X 10 20 30 40 50 60 70  
SDSYNYNOKFKGKATLVTDTSASTAYMELSLRSEDVAVYCAARNRDYNNWYFDVWGEGTLVTVSSASTK  
|||||  
SDSYNYNOKFKGKATLVTDTSASTAYMELSLRSEDVAVYCAARNRDYNNWYFDVWGEGTLVTVSSASTK  
80 90 100 110 120 130 140  
GSPVPLAPSSKSTGGTAALGCLVKDYFPEPTVSWNSGALTSGVHTFPAVLQSSGLYSLSVTVTPSSSL  
|||||  
GSPVPLAPSSKSTGGTAALGCLVKDYFPEPTVSWNSGALTSGVHTFPAVLQSSGLYSLSVTVTPSSSL  
150 160 170 180 190 200 210

220 230 240 250 260 270 280  
GTQYICNVNHPKSNTKVDKREPKSCDKTHTCCPCPAPPELLGGPSVFLFPKPKDITLMISRTPEVTCVVVD  
|||||  
GTQYICNVNHPKSNTKVDKREPKSCDKTHTCCPCPAPPELLGGPSVFLFPKPKDITLMISRTPEVTCVVVD  
220 230 240 250 260 270 280  
VSHDEPEVKFNMYVDGVEVHNKAKTPREQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTIS  
|||||  
VSHDEPEVKFNMYVDGVEVHNKAKTPREQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTIS  
290 300 310 320 330 340 350 360  
KAKGPREPQVYTLPPSREMTKNOVSLTCLVKGYFSPDIAVEWESNGOPENNYKTPPVLDSDGSFFLYSK  
|||||  
KAKGPREPQVYTLPPSREMTKNOVSLTCLVKGYFSPDIAVEWESNGOPENNYKTPPVLDSDGSFFLYSK  
370 380 390 400 410 420 430  
440 450 460 X  
LTVDKSRWQOQGNVFCSCVMHEALHNNHYTKQSLSPGK  
|||||  
LTVDKSRWQOQGNVFCSCVMHEALHNNHYTKQSLSPGK  
440 450 460 470

5. US-09-499-662-89 (1-470)  
US-09-053-583-11 Sequence 117, Application US/09053583A

Sequence 117, Application US/09053583A

GENERAL INFORMATION:  
APPLICANT: Serizawa, Nobufusa  
APPLICANT: Ichikawa, Kimihisa  
APPLICANT: Ohsumi, Jun  
APPLICANT: Ohtsuki, Masahiko  
APPLICANT: Haruyama, Hideyuki  
APPLICANT: Takahashi, Tohru  
APPLICANT: Yoshida, Hiroko  
APPLICANT: Shiraiishi, Akio  
APPLICANT: Yonehara, Shin  
TITLE OF INVENTION: Anti-Fas Antibodies  
FILE REFERENCE: 980126/HG  
CURRENT APPLICATION NUMBER: US/09/053,583A  
CURRENT FILING DATE: 1998-04-01  
EARLIER APPLICATION NUMBER: JP HEI 9-82953  
EARLIER FILING DATE: 1997-04-01  
EARLIER APPLICATION NUMBER: JP HEI 9-169088  
EARLIER FILING DATE: 1997-06-25  
EARLIER APPLICATION NUMBER: JP HEI 9-276064  
EARLIER FILING DATE: 1997-10-08  
NUMBER OF SEQ ID NOS: 123  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 117  
LENGTH: 470  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Designed heavy  
OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 469 Optimized Score = 469 Significance = 3.00  
Residue Identity = 99% Matches = 468 Mismatches = 2  
Gaps = 0 Conservative Substitutions = 0

X 10 20 30 40 50 60 70  
MCWSCIILFLVATATGVHSQVQLVQSGAEVKKPGASVKVSCKASGYTFTSYMQWVKQAPGORLEWNGEIDP  
|||||  
MCWSCIILFLVATATGVHSQVQLVQSGAEVKKPGASVKVSCKASGYTFTSYMQWVKQAPGORLEWNGEIDP  
X 10 20 30 40 50 60 70  
SDSYNYNOKFKGKATLVTDTSASTAYMELSLRSEDVAVYCAARNRDYNNWYFDVWGEGTLVTVSSASTK  
|||||  
SDSYNYNOKFKGKATLVTDTSASTAYMELSLRSEDVAVYCAARNRDYNNWYFDVWGEGTLVTVSSASTK  
80 90 100 110 120 130 140

SDSYTYNOKFKGKATLTVDTSATYMELSLRSEDYAVYYCARNRDYSNNWYFDVWGEGTLVTVSSASTK  
80 90 100 110 120 130 140  
150 160 170 180 190 200 210  
GPSVFLPSSKSTSGTAAALGCLVDYFPEPVTVSWNSGALTSVHTTFAVLQSSGLYSLSSVTVPPSSSL  
150 160 170 180 190 200 210  
GPSVFLPSSKSTSGTAAALGCLVDYFPEPVTVSWNSGALTSVHTTFAVLQSSGLYSLSSVTVPPSSSL  
150 160 170 180 190 200 210  
220 230 240 250 260 270 280  
GTQTYICNVNHPKSNKVDKRVPEPKSCDTHTCPPCPAPPELLGGPSVFLFPKPKDTLMISRTPPEVTCVVVD  
GTQTYICNVNHPKSNKVDKRVPEPKSCDTHTCPPCPAPPELLGGPSVFLFPKPKDTLMISRTPPEVTCVVVD  
220 230 240 250 260 270 280  
GTQTYICNVNHPKSNKVDKRVPEPKSCDTHTCPPCPAPPELLGGPSVFLFPKPKDTLMISRTPPEVTCVVVD  
220 230 240 250 260 270 280  
VSHEDPEVFNNYVDGVEVHNNAKTPREQYNTYRVSVLTVLHODWLNKREYKCKVSNKALPAPIETIS  
290 300 310 320 330 340 350 360  
VSHEDPEVFNNYVDGVEVHNNAKTPREQYNTYRVSVLTVLHODWLNKREYKCKVSNKALPAPIETIS  
290 300 310 320 330 340 350 360  
KAKQPREQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTPPVLDSDGSFFLYSK  
370 380 390 400 410 420 430  
KAKQPREQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTPPVLDSDGSFFLYSK  
370 380 390 400 410 420 430  
440 450 460 X  
LIVDKSRWQOGNVFSCSVNHEALHNNHYTKSLSPGK  
LIVDKSRWQOGNVFSCSVNHEALHNNHYTKSLSPGK  
440 450 460 470

## 6. US-09-499-662-89 (1-470)

US-09-408-646-14 Sequence 147, Application US/09408646A

Sequence 147, Application US/09408646A  
GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa

APPLICANT: Haruyama, Hideyuki

APPLICANT: Nakahara, Kaori

APPLICANT: Tamaki, Ikuko

APPLICANT: Takahashi, Tohru

TITLE OF INVENTION: Anti-Fas Antibodies

FILE REFERENCE: 990540/HG

CURRENT APPLICATION NUMBER: US/09/408,646A

EARLIER FILING DATE: 1999-09-30

EARLIER FILING DATE: 1998-09-30

NUMBER OF SEQ ID NOS: 165

SEQ ID NO 147

LENGTH: 470

TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed heavy

OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 468 Optimized Score = 468 Significance = 2.99

Residue Identity = 99% Matches = 466 Mismatches = 3

Gaps = 0 Conservative Substitutions = 1

X 10 20 30 40 50 60 70  
MGWSCILFLVATATGVHSQVQLVQSGAEVKKPGASVKVSCKASGVTFTSYNMQWVKQAPGQLEWGMGIDP  
150 160 170 180 190 200 210  
MGWSCILFLVATATGVHSQVQLVQSGAEVKKPGASVKVSCKASGVTFTSYNMQWVKQAPGQLEWGMGIDP  
150 160 170 180 190 200 210  
X 10 20 30 40 50 60 70

SDSYTYNOKFKGKATLTVDTSATYMELSLRSEDYAVYYCARNRDYSNNWYFDVWGEGTLVTVSSASTK  
80 90 100 110 120 130 140  
SDSYTYNOKFKGKATLTVDTSATYMELSLRSEDYAVYYCARNRDYSNNWYFDVWGEGTLVTVSSASTK  
80 90 100 110 120 130 140

150 160 170 180 190 200 210  
GPSVFLPSSKSTSGTAAALGCLVDYFPEPVTVSWNSGALTSVHTTFAVLQSSGLYSLSSVTVPPSSSL  
150 160 170 180 190 200 210  
GPSVFLPSSKSTSGTAAALGCLVDYFPEPVTVSWNSGALTSVHTTFAVLQSSGLYSLSSVTVPPSSSL  
150 160 170 180 190 200 210  
220 230 240 250 260 270 280  
GTQTYICNVNHPKSNKVDKRVPEPKSCDTHTCPPCPAPPELLGGPSVFLFPKPKDTLMISRTPPEVTCVVVD  
GTQTYICNVNHPKSNKVDKRVPEPKSCDTHTCPPCPAPPELLGGPSVFLFPKPKDTLMISRTPPEVTCVVVD  
220 230 240 250 260 270 280  
GTQTYICNVNHPKSNKVDKRVPEPKSCDTHTCPPCPAPPELLGGPSVFLFPKPKDTLMISRTPPEVTCVVVD  
220 230 240 250 260 270 280  
VSHEDPEVFNNYVDGVEVHNNAKTPREQYNTYRVSVLTVLHODWLNKREYKCKVSNKALPAPIETIS  
290 300 310 320 330 340 350 360  
VSHEDPEVFNNYVDGVEVHNNAKTPREQYNTYRVSVLTVLHODWLNKREYKCKVSNKALPAPIETIS  
290 300 310 320 330 340 350 360  
KAKQPREQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTPPVLDSDGSFFLYSK  
370 380 390 400 410 420 430  
KAKQPREQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTPPVLDSDGSFFLYSK  
370 380 390 400 410 420 430  
440 450 460 X  
LIVDKSRWQOGNVFSCSVNHEALHNNHYTKSLSPGK  
LIVDKSRWQOGNVFSCSVNHEALHNNHYTKSLSPGK  
440 450 460 470

## 7. US-09-499-662-89 (1-470)

US-09-408-646-14 Sequence 145, Application US/09408646A

Sequence 145, Application US/09408646A  
GENERAL INFORMATION:

APPLICANT: Serizawa, Nobufusa

APPLICANT: Haruyama, Hideyuki

APPLICANT: Nakahara, Kaori

APPLICANT: Tamaki, Ikuko

APPLICANT: Takahashi, Tohru

TITLE OF INVENTION: Anti-Fas Antibodies

FILE REFERENCE: 990540/HG

CURRENT APPLICATION NUMBER: US/09/408,646A

EARLIER FILING DATE: 1999-09-30

EARLIER FILING DATE: 1998-09-30

NUMBER OF SEQ ID NOS: 165

SEQ ID NO 145

LENGTH: 470

TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Designed heavy

OTHER INFORMATION: chain of humanized anti-Fas antibody

Initial Score = 468 Optimized Score = 468 Significance = 2.99

Residue Identity = 99% Matches = 466 Mismatches = 4

Gaps = 0 Conservative Substitutions = 0

X 10 20 30 40 50 60 70  
MGWSCILFLVATATGVHSQVQLVQSGAEVKKPGASVKVSCKASGVTFTSYNMQWVKQAPGQLEWGMGIDP  
150 160 170 180 190 200 210  
MGWSCILFLVATATGVHSQVQLVQSGAEVKKPGASVKVSCKASGVTFTSYNMQWVKQAPGQLEWGMGIDP  
150 160 170 180 190 200 210  
X 10 20 30 40 50 60 70

SDSYTYNOKFKGKATLTVDTSATYMELSLRSEDYAVYYCARNRDYSNNWYFDVWGEGTLVTVSSASTK  
80 90 100 110 120 130 140  
SDSYTYNOKFKGKATLTVDTSATYMELSLRSEDYAVYYCARNRDYSNNWYFDVWGEGTLVTVSSASTK  
80 90 100 110 120 130 140

150 160 170 180 190 200 210  
 GSVFPLAPSSKSTSGTALGCLVDPPEPTVMSNGALNSGHTTPAVYLOSSGLSSSVTVSSSL  
 GSVFPLAPSSKSTSGTALGCLVDPPEPTVMSNGALNSGHTTPAVYLOSSGLSSSVTVSSSL  
 150 160 170 180 190 200 210  
 220 230 240 250 260 270 280  
 GTQTYICNVNHRKPSNTKVDKREPKSCDTHNCPBPAPBELLGSPVFLPPKPKDTLMSRTEVTCVVD  
 GTQTYICNVNHRKPSNTKVDKREPKSCDTHNCPBPAPBELLGSPVFLPPKPKDTLMSRTEVTCVVD  
 220 230 240 250 260 270 280  
 VSHEDPEVFNMYVGVGVHNAKTRPREQYNSTVAVSVLVLMODMLNGEKYCKVSNKALPADIERTIS  
 VSHEDPEVFNMYVGVGVHNAKTRPREQYNSTVAVSVLVLMODMLNGEKYCKVSNKALPADIERTIS  
 290 300 310 320 330 340 350 360  
 KAKGPREQVYTLPPSRREMTKNQVSLTCLVKGFPSPDIAYEMESNGCPENNYKTPPVLDSDGSFFLYSK  
 KAKGPREQVYTLPPSRREMTKNQVSLTCLVKGFPSPDIAYEMESNGCPENNYKTPPVLDSDGSFFLYSK  
 370 380 390 400 410 420 430  
 KAKGPREQVYTLPPSRREMTKNQVSLTCLVKGFPSPDIAYEMESNGCPENNYKTPPVLDSDGSFFLYSK  
 KAKGPREQVYTLPPSRREMTKNQVSLTCLVKGFPSPDIAYEMESNGCPENNYKTPPVLDSDGSFFLYSK  
 440 450 460 470  
 LTVDSRMQOGNVFSCSYMHEALHNHYTOKSLSPGK  
 LTVDSRMQOGNVFSCSYMHEALHNHYTOKSLSPGK  
 440 450 460 470  
 LTVDSRMQOGNVFSCSYMHEALHNHYTOKSLSPGK  
 LTVDSRMQOGNVFSCSYMHEALHNHYTOKSLSPGK

8. US-09-499-662-89 (1-470)  
 US-09-408-646-15 Sequence 157, Application US/09408646A

Sequence 157, Application US/09408646A  
 GENERAL INFORMATION:  
 APPLICANT: Serizawa, Nobufusa  
 APPLICANT: Haruyama, Hideyuki  
 APPLICANT: Nakahara, Kaori  
 APPLICANT: Tamaki, Ikuko  
 APPLICANT: Takahashi, Tohru  
 TITLE OF INVENTION: Anti-Fas Antibodies  
 FILE REFERENCE: 990540/HG  
 CURRENT APPLICATION NUMBER: US/09/408,646A  
 CURRENT FILING DATE: 1999-09-30  
 EARLIER APPLICATION NUMBER: JP 10-276881  
 EARLIER FILING DATE: 1998-09-30  
 NUMBER OF SEQ ID NOS: 165  
 SEQ ID NO 157  
 LENGTH: 470  
 TYPE: PRT  
 ORGANISM: Artificial Sequence  
 FEATURE:  
 OTHER INFORMATION: Description of Artificial Sequence: Designed  
 OTHER INFORMATION: heavy chain of humanized anti-Fas antibody

Initial Score - 467 Optimized Score - 467 Significance - 2.99  
 Residue Identity - 98% Matches - 463 Mismatches - 5  
 Gaps - 0 Conservative Substitutions - 2

X 10 20 30 40 50 60 70  
 MGNSCIILFLVATATGVSQVLOVOSGAEVYKRGASVYKCRKASGTYFTSYMMQWYKQAPGQLEMGELDP  
 MGNSCIILFLVATATGVSQVLOVOSGAEVYKRGASVYKCRKASGTYFTSYMMQWYKQAPGQLEMGELDP  
 X 10 20 30 40 50 60 70  
 SDSYTYNOKFKGKATLVDTASATYVMELSLSRSDTAVYICARNRDSNNMYFVWEGTLVTVSSASTK  
 SDSYTYNOKFKGKATLVDTASATYVMELSLSRSDTAVYICARNRDSNNMYFVWEGTLVTVSSASTK  
 80 90 100 110 120 130 140  
 GSVFPLAPSSKSTSGTALGCLVDPPEPTVMSNGALNSGHTTPAVYLOSSGLSSSVTVSSSL  
 GSVFPLAPSSKSTSGTALGCLVDPPEPTVMSNGALNSGHTTPAVYLOSSGLSSSVTVSSSL  
 90 100 110 120 130 140  
 SDSYTYNOKFKGKATLVDTASATYVMELSLSRSDTAVYICARNRDSNNMYFVWEGTLVTVSSASTK  
 SDSYTYNOKFKGKATLVDTASATYVMELSLSRSDTAVYICARNRDSNNMYFVWEGTLVTVSSASTK

150 160 170 180 190 200 210  
 GSVFPLAPSSKSTSGTALGCLVDPPEPTVMSNGALNSGHTTPAVYLOSSGLSSSVTVSSSL  
 GSVFPLAPSSKSTSGTALGCLVDPPEPTVMSNGALNSGHTTPAVYLOSSGLSSSVTVSSSL  
 150 160 170 180 190 200 210  
 220 230 240 250 260 270 280  
 GTQTYICNVNHRKPSNTKVDKREPKSCDTHNCPBPAPBELLGSPVFLPPKPKDTLMSRTEVTCVVD  
 GTQTYICNVNHRKPSNTKVDKREPKSCDTHNCPBPAPBELLGSPVFLPPKPKDTLMSRTEVTCVVD  
 220 230 240 250 260 270 280  
 VSHEDPEVFNMYVGVGVHNAKTRPREQYNSTVAVSVLVLMODMLNGEKYCKVSNKALPADIERTIS  
 VSHEDPEVFNMYVGVGVHNAKTRPREQYNSTVAVSVLVLMODMLNGEKYCKVSNKALPADIERTIS  
 290 300 310 320 330 340 350 360  
 KAKGPREQVYTLPPSRREMTKNQVSLTCLVKGFPSPDIAYEMESNGCPENNYKTPPVLDSDGSFFLYSK  
 KAKGPREQVYTLPPSRREMTKNQVSLTCLVKGFPSPDIAYEMESNGCPENNYKTPPVLDSDGSFFLYSK  
 370 380 390 400 410 420 430  
 KAKGPREQVYTLPPSRREMTKNQVSLTCLVKGFPSPDIAYEMESNGCPENNYKTPPVLDSDGSFFLYSK  
 KAKGPREQVYTLPPSRREMTKNQVSLTCLVKGFPSPDIAYEMESNGCPENNYKTPPVLDSDGSFFLYSK  
 440 450 460 470  
 LTVDSRMQOGNVFSCSYMHEALHNHYTOKSLSPGK  
 LTVDSRMQOGNVFSCSYMHEALHNHYTOKSLSPGK  
 440 450 460 470  
 LTVDSRMQOGNVFSCSYMHEALHNHYTOKSLSPGK  
 LTVDSRMQOGNVFSCSYMHEALHNHYTOKSLSPGK

9. US-09-499-662-89 (1-470)  
 US-09-408-646-9 Sequence 9, Application US/09408646A

Sequence 9, Application US/09408646A  
 GENERAL INFORMATION:  
 APPLICANT: Serizawa, Nobufusa  
 APPLICANT: Haruyama, Hideyuki  
 APPLICANT: Nakahara, Kaori  
 APPLICANT: Tamaki, Ikuko  
 APPLICANT: Takahashi, Tohru  
 TITLE OF INVENTION: Anti-Fas Antibodies  
 FILE REFERENCE: 990540/HG  
 CURRENT APPLICATION NUMBER: US/09/408,646A  
 CURRENT FILING DATE: 1999-09-30  
 EARLIER APPLICATION NUMBER: JP 10-276881  
 EARLIER FILING DATE: 1998-09-30  
 NUMBER OF SEQ ID NOS: 165  
 SEQ ID NO 9  
 LENGTH: 464  
 TYPE: PRT  
 ORGANISM: Mus musculus

Initial Score - 229 Optimized Score - 410 Significance - 1.24  
 Residue Identity - 70% Matches - 331 Mismatches - 107  
 Gaps - 6 Conservative Substitutions - 26

X 10 20 30 40 50 60 70  
 MGNSCIILFLVATATGVSQVLOVOSGAEVYKRGASVYKCRKASGTYFTSYMMQWYKQAPGQLEMGELDP  
 MGNSCIILFLVATATGVSQVLOVOSGAEVYKRGASVYKCRKASGTYFTSYMMQWYKQAPGQLEMGELDP  
 X 10 20 30 40 50 60 70  
 SDSYTYNOKFKGKATLVDTASATYVMELSLSRSDTAVYICARNRDSNNMYFVWEGTLVTVSSASTK  
 SDSYTYNOKFKGKATLVDTASATYVMELSLSRSDTAVYICARNRDSNNMYFVWEGTLVTVSSASTK  
 80 90 100 110 120 130 140  
 GSVFPLAPSSKSTSGTALGCLVDPPEPTVMSNGALNSGHTTPAVYLOSSGLSSSVTVSSSL  
 GSVFPLAPSSKSTSGTALGCLVDPPEPTVMSNGALNSGHTTPAVYLOSSGLSSSVTVSSSL  
 90 100 110 120 130 140  
 SDSYTYNOKFKGKATLVDTASATYVMELSLSRSDTAVYICARNRDSNNMYFVWEGTLVTVSSASTK  
 SDSYTYNOKFKGKATLVDTASATYVMELSLSRSDTAVYICARNRDSNNMYFVWEGTLVTVSSASTK

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